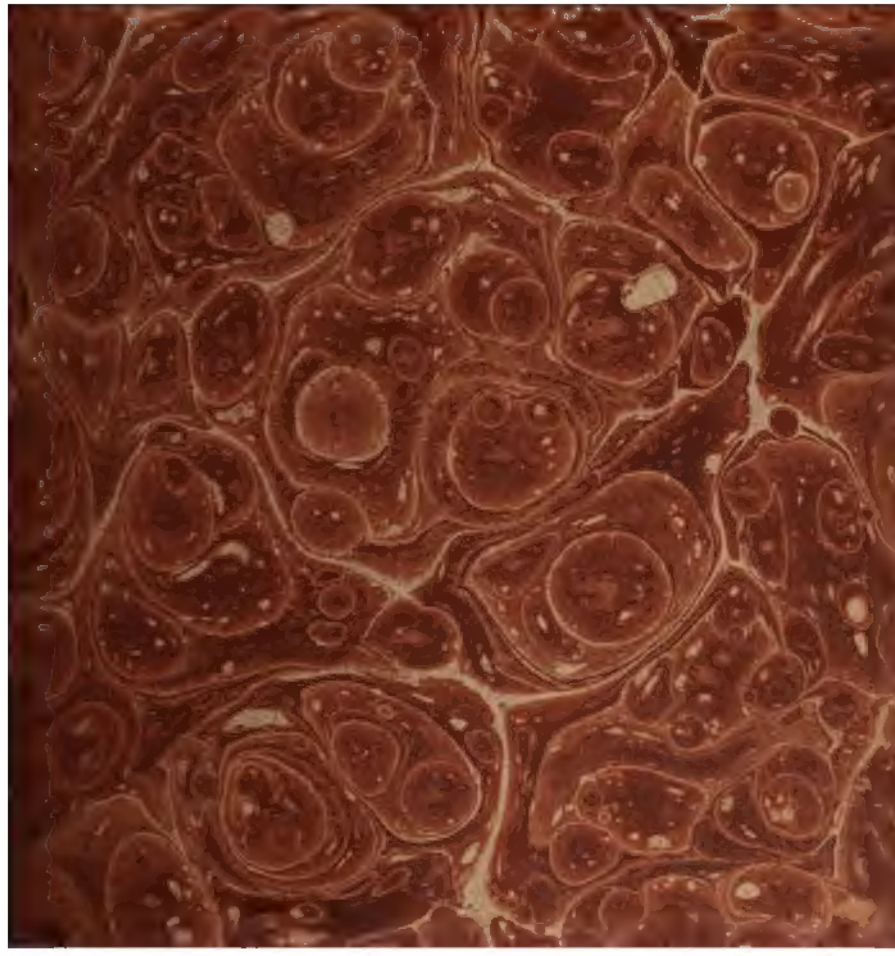

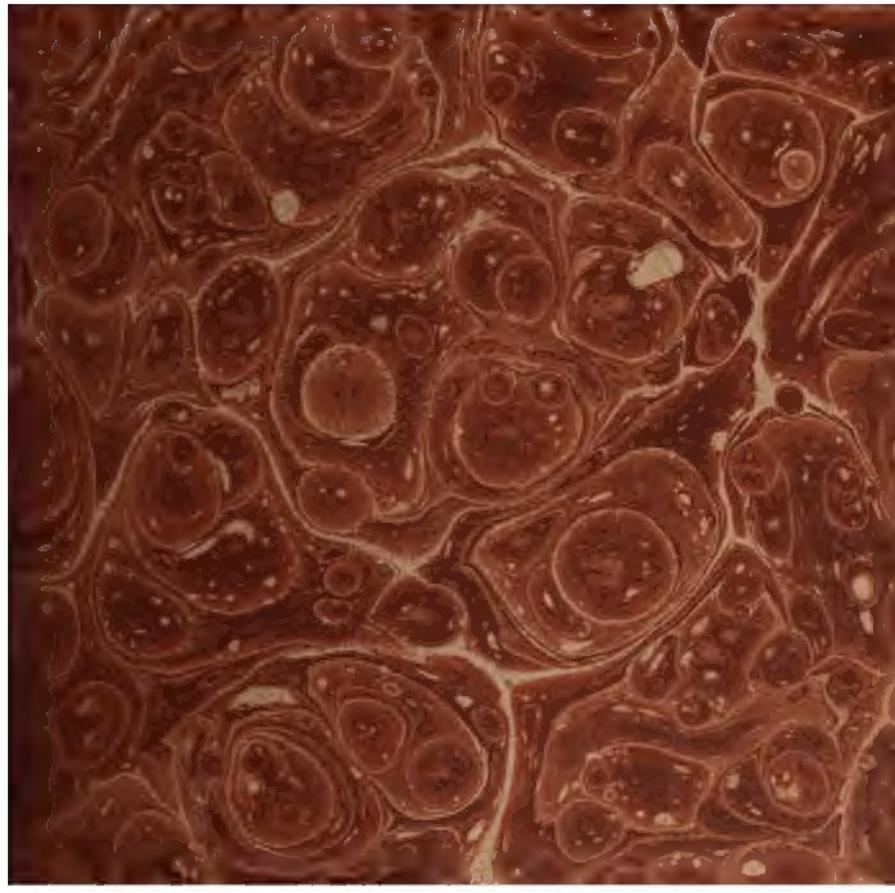

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403 [p. 109 in order] are to be found
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C

ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, PHILADELPHIA, AND THE NAT. HIST. SOCIETY OF PARIS; PRESIDENT OF THE LINNÆAN SOCIETY.

THE FIGURES BY

JAMES SOWERBY, F.L.S.

——"VIRESQUE ACQUIRIT EUNDO."——VIRG.

VOL. II.

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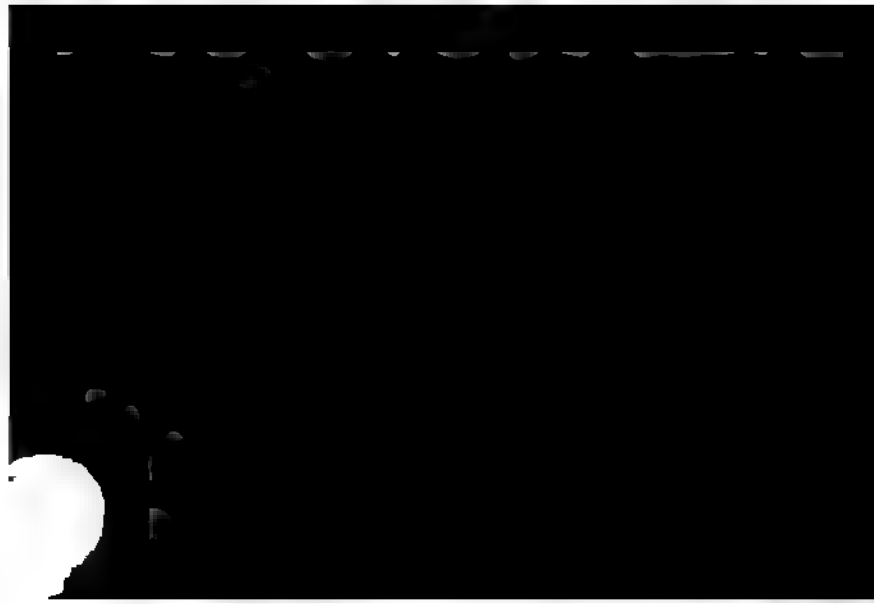


ANTHOXANTHUM odoratum.

Sweet-ſcented Vernal Graſs.

DIANDRIA Digynia.

GEN. CHAR. *Cal.* a huſk of 2 valves, ſingle-flowered *Cor.* of 2 valves, awned. *Seed* 1.

SPEC. CHAR. Spike ovato-oblong. Flowers longer than their awns, ſtanding on ſhort ſtalks.

SYN. Anthoxanthum odoratum. *Linn. Sp. Pl.* 40. *Sm. Fl. Brit.* 31. *Hudſ.* 11. *With.* 58. *Hull.* 7. *Relh.* 11. *Sibth.* 18. *Abbot.* 8. *Curt. Lond. faſc.* 1. *t.* 4. *Mart. Fl. Ruſt. t.* 23.

Gramen vernum, ſpicâ brevi laxâ. *Raii Syn.* 398.

THIS is the only Britiſh graſs, except *Bromus diandrus* and *Carex atrata*, that has fewer than 3 ſtamina, by which mark it is therefore eaſily known. It grows frequently and plentifully in paſtures, flowering in May and June, and is ſuppoſed to have a principal ſhare in cauſing that delightful fragrance ſo well known in a hay-field; for when partially dried it exhales a very ſweet odour, and, even in a recent ſtate, its ſtalks if chewed are found highly aromatic, taſting not unlike thoſe of freſh lavender. It is eſteemed a good food for cattle in general, but we know of no particular experiments that have been made upon it.

NARDUS stricta.

Mat-grass.

TRIANDRIA Monogynia.

GEN. CHAR. *Cal.* none. *Corolla* of 2 valves.

SPEC. CHAR. Spike slender, erect, the flowers all pointing one way.

SYN. Nardus stricta. *Linn. Sp. Pl.* 77. *Huds. Fl. An.* 22. *With. Bot. Arr.* 54. *Relh. Cant.* 21. *Sibth. Ox.* 33.

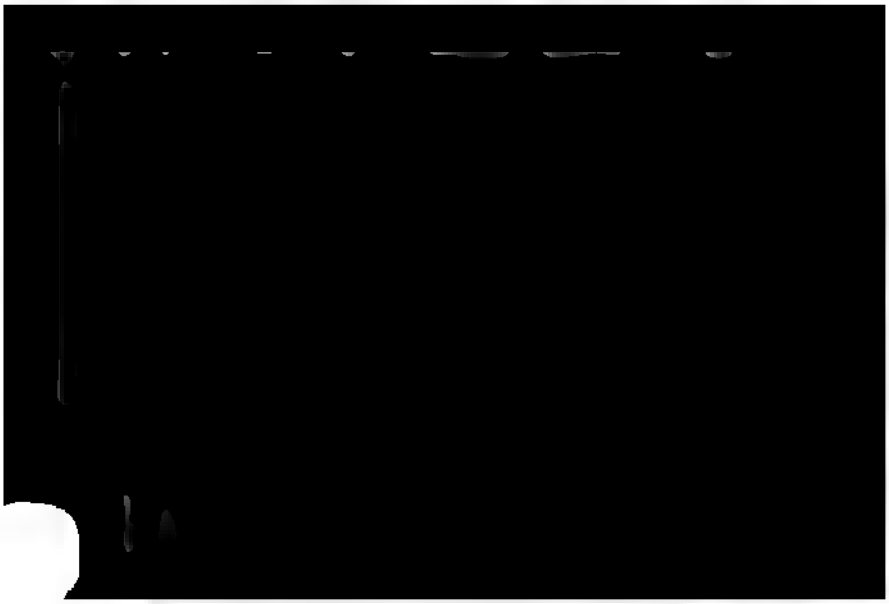
Gramen sparteum juncifolium. *Raii Syn.* 393.

THIS grass may be observed on sandy heaths in most parts of England, especially in moist or moorish spots, where it forms thick tufts of rigid rush-like leaves, which remain through winter

——— "bleaching in the northern blast."

The roots are perennial, fibrous, strong and downy. Leaves linear, very narrow, acute, striated, rough in the margin, very harsh and rigid, suddenly divaricating from their broad sheathing striated base, which envelops the bottom of the stalk, and is itself enveloped with scales externally, and crowned at the divarication with the usual stipula of grasses. Each stalk supports one leaf, and is erect, striated, rough, of the same texture and harshness as the leaves, and a little longer, bearing a very slender spike of equally slender flowers, alternately placed in two rows, but all pointing one way, though very little divaricated at any time from the stalk, and both before and after flowering clapped close to it. Valves of the calyx unequal in length, purplish and rough in the margin. Filaments a little exceeding the longest valve, tipped with nearly linear anthers. Germen small. Style solitary, slender, downy.

The Mat-grass flowers in May, June, or later. Of its agricultural uses little can be said, for cattle in general refuse it; and though mats or baskets might be made of it, we are supplied from Spain with better grasses for those purposes, particularly *Stipa tenuissima*.



3.

PHALARIS canariensis.

Manured Canary-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 carinated equal valves, longer than the *corolla*, single-flowered.

SPEC. CHAR. Panicle ovate, like a spike. Calyx-glumes boat-shaped. Corolla of four valves. Root fibrous.

SYN. Phalaris canariensis. *Linn. Sp. Pl.* 79. *Sm. Fl. Brit.* 62. *Huds.* 23. *With.* 113. *Hull.* 15. *Sibth.* 33. *Mart. Rust. t.* 17.

P. major semine albo. *Dill. in Raii Syn.* 394.

NOW naturalized in cultivated grounds, though probably not originally a native. We gathered it in Kennington fields. It is annual, flowering from June to August. Its small polished seed is well known to those who feed Canary-birds.

The root consists of several white fibres. Stems one or more, 2 feet high, striated, leafy, with brown joints. Leaves broad and acute, soft and pliable, with scarcely any roughness: their


2310

PHALARIS arenaria.

Sea Canary-grafs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of two carinated equal valves, longer than the corolla, fingle-flowered.

SPEC. CHAR. Spike ovato-lanceolate. Glumes ciliated. Stems feveral.

SYN. Phalaris arenaria. *Hudf. Fl. An.* 23.

Ph. phleoides β. *Ait. Hort. Kew. v.* 1. 86.

Phleum arenarium. *Linn. Sp. Pl.* 88. *With. Bot. Arr.* 62.

Gramen typhinum maritimum minus. *Raii Syn.* 398.

FOUND every where about fandy fea-fhores and the neighbouring fields; it has even been obferved upon Swaffham heath by James Crowe, Efq. and on that of Newmarket by the Rev. Mr. Hemfted, who favoured us with this fpecimen. On the fea-coaft the plant is feldom fo luxuriant. It is an annual, and flowers in June.

The root is fibrous, and downy, like the grafs laft defcribed. Stems feveral, dividing from the crown of the root or a little higher as in wheat, fometimes bent at the joints, clothed with leaves, whofe edge is a little rough, their fheaths long, inflated, ftriated and smooth. The flower-ftalk commonly very

PHALARIS phleoides.

Cat's-tail Canary-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 carinated equal valves, longer than the corolla, single flowered.

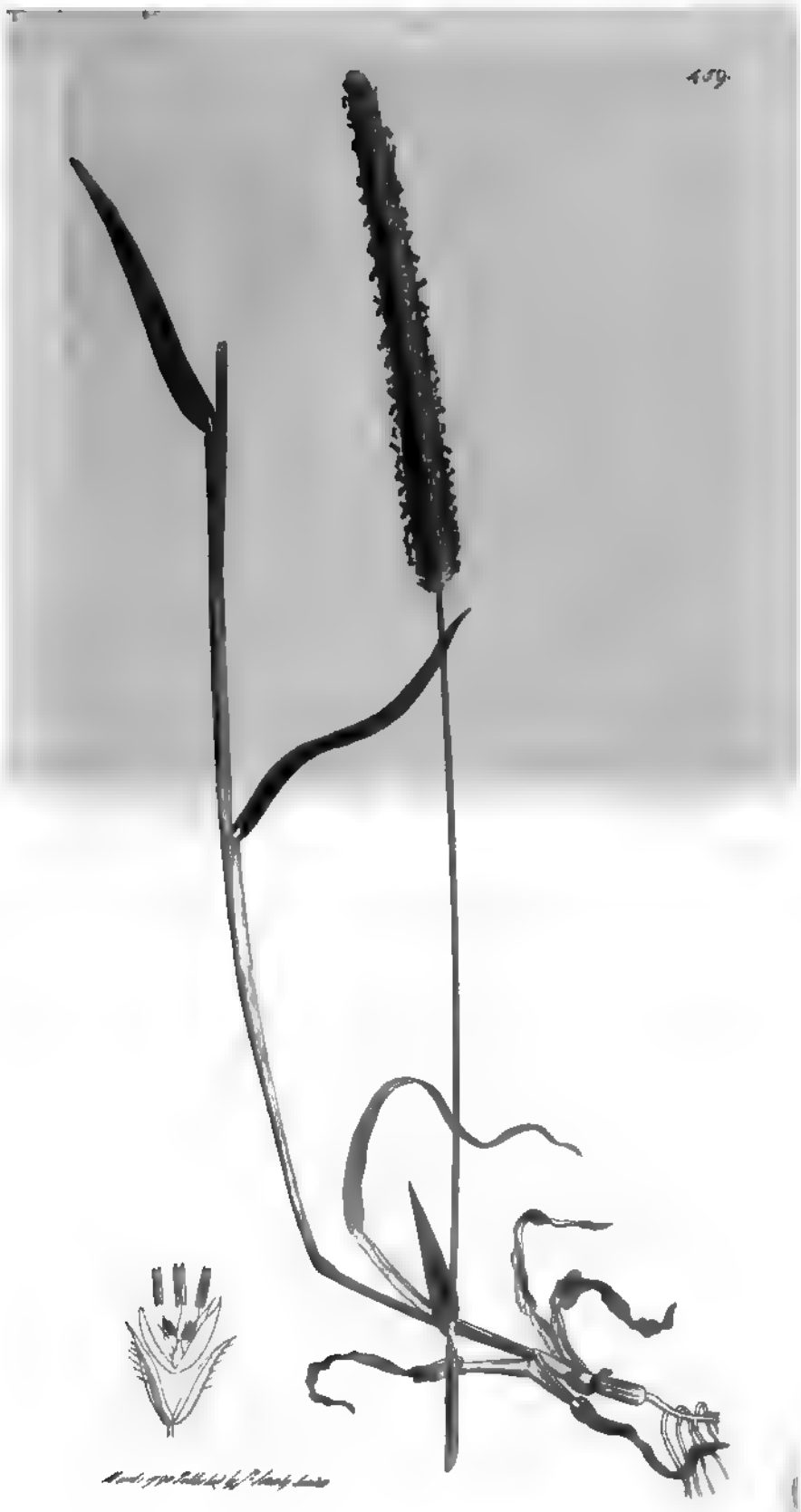
SPEC. CHAR. Panicle nearly cylindrical, in the form of a spike. Glumes linear-lanceolate, smoothish, their inner margin abrupt. Stem simple.

SYN. Phalaris phleoides. *Linn. Sp. Pl.* 80. *With.* 114. *Fl. Dan. t.* 531.

Gramen typhinum, spicâ conoide striatâ, culmo violaceo. *Barrel. Ic. t.* 21.

A NATIVE of high sandy countries, found by Mr. Crowe and Mr. Woodward on Swaffham heath in 1780; but it appears from the Banksian Herbarium that the late Mr. Lyons had previously gathered it in Cambridgeshire, though the two gentlemen above mentioned have the merit of determining it, Mr. Hudson having supposed his *Phleum paniculatum* (a very different grass) to be the *Phalaris phleoides* of Linnæus, which last he probably never saw. The Rev. Mr. Hemsted gathered this specimen on Chippenham Park wall, Cambridgeshire, flowering in July.

Root fibrous, perennial, crowned with tufts of spreading glaucous leaves which endure the winter. Straw simple, generally solitary, most leafy below, round, smooth, purple and shining above, a foot and half high. Leaves sheathing, linear-lanceolate, rough at the edge, their sheaths scarcely inflated, roughish. Panicle terminal, solitary, erect, dense, nearly cylindrical and exactly like a spike, but when bent on one side it separates into lobes or branches of several flowers each. Calyx nearly linear, somewhat constricted near the top, purplish; the valves linear-lanceolate, compressed, pointed, 3-nerved, a little divaricated at the point, and furnished with a white membranous margin which at its summit is in some degree abrupt, approaching to the structure of a *Phleum*; but this species cannot be considered as such, on account of its strict affinity to *Phalaris arenaria*, see our *t.* 222, from which it differs however, as a species, in having a perennial root, a branched or panicled spike, glumes less frequently and completely ciliated, and lanceolate (not abrupt or crenate) petals.——We regret that we have not yet been able to obtain a wild specimen of *Phleum paniculatum*, that it might have been published at the same time with this.


459.

PHALARIS arundinacea.

Reed Canary-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 carinated equal valves, single-flowered, longer than the *corolla*, which is double, the inner one hardened investing the seed.

SPEC. CHAR. Panicle upright, with spreading branches. Flowers crowded, leaning one way.

SYN. Phalaris arundinacea. *Linn. Sp. Pl.* 80. *Huds.* 23. *Abbot.* 13. *Fl. Dan. t.* 259. *Ehrh. Calam.* 51. *Schrad. Germ. v.* 1. 180. *t.* 6. *f.* 5.

Arundo colorata. *Soland. in Ait. H. Kew. v.* 1. 116. *Sm. Fl. Brit.* 147. *Knapp. t.* 98. *Hall. v.* 2. 35. *Relh.* 44.

Calamagrostis variegata. *With.* 124.

C. colorata. *Sibth.* 37.

Gramen arundinaceum acerosâ glumâ nostras. *Raii Syn.* 400.

MISLED by great authority, I have in *Fl. Brit.* referred this grass to *Arundo*, and Mr. Sowerby by mistake gave its figure in *t.* 402 for *A. epigejos*, really represented in *t.* 403. We wish to correct both errors by this new page of letterpress, and another to replace *p.* 403.

The present plant is extremely common about pools, ditches and rivers, flowering in July. A variegated kind is frequent in gardens. The root is perennial, creeping, and tufted. Stems from 2 to 5 feet high, erect, strong, reedy, smooth and leafy, with several joints. Leaves lanceolate, striated, pointed, smooth, more or less glaucous, with long, ribbed, scarcely swelling sheaths. Stipula short, bluntish. Panicle erect, branched, lobed, its branches spreading, angular and rough. Flowers crowded, leaning one way, often purplish. Calyx-glumes equal, keeled, ribbed. Inner corolla shorter than the calyx, downy; cartilaginous at length, and enfolding the seed; outer of 2 very minute linear, gibbous, hard valves, each bearing a tuft of hairs exceeding their own length.

Dr. Schrader rightly observes that the hardened permanent corolla proves this a *Phalaris*, and that what have been taken for mere tufts of hair, are really outer petals. These parts not being represented in *t.* 402, we have inserted them in *t.* 2160, as 2.

7.

PANICUM verticillatum.
Rough Panick-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 3 valves, single-flowered; the third valve very small. *Seed* invested with the permanent hardened corolla.

SPEC. CHAR. Spike whorled; spikelets in fours. Involucra of two bristles, rough with reversed teeth, and embracing a single flower.

SYN. Panicum verticillatum. *Linn. Sp. Pl.* 82. *Sm. Fl. Brit.* 64. *Hudf.* 24. *With.* 114. *Hull.* 15. *Curt. Lond. fasc.* 4. *t.* 6.

Gramen paniceum, spicâ asperâ. *Raii Syn.* 394.

FOUND occasionally in cultivated fields, particularly such as are somewhat moist. We believe no place in England is so certainly known to produce it as the neighbourhood of Battersea, from whence this specimen was taken. It is merely a botanical curiosity, being an useless, if not a noxious, weed to the agriculturist. It is annual, flowering in July or August.

Root fibrous. Stems widely spreading, leafy, rough above, from 6 to 24 inches high. Leaves lanceolate, harsh, very rough on the margin, pointed, with a fringed stipula crowning the inside of their sheath. Spike solitary, terminal, erect, green with a purplish tinge, composed of many whorled spikelets, four in a whorl when the plant enjoys a competent share of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PANICUM viride.

Green Panick-grass.

TRIANDRIA Digynia.

Gen. Char. *Cal.* of 3 valves, single-flowered; the third valve very small. *Seed* invested with the permanent hardened corolla.

Spec. Char. Spike cylindrical; spikelets crowded. Involucra of several bristles, rough with erect teeth, and embracing two flowers.

Syn. Panicum viride. *Linn. Sp. Pl.* 83. *Sm. Fl. Brit.* 65. *Hudf.* 24. *With.* 115. *Hull.* 15. *Curt. Lond. fasc.* 4. *t.* 5.

Gramen paniceum, spicâ simplici lævi. *Raii Syn.* 393.

THIS is also a native of cultivated ground, but generally in more dry and sandy places than *P. verticillatum*, nor is it esteemed so rare as that species. We gathered it at Battersea, and have found it about Norwich. It is annual, flowering at the same time with the preceding, and is of as little value to the farmer.

Root fibrous. Stems spreading, from 3 to 18 inches high, leafy, rough above. Leaves and stipule much like the last.

PANICUM Crus-galli.
Loose Panick-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 3 valves, single-flowered; the third valve very small. *Seed* invested with the permanent hardened corolla.

SPEC. CHAR. Spike doubly compound; its stalk mostly five-angled: spikelets alternate or in pairs, subdivided. Calyx bearded, rough.

SYN. Panicum Crus-galli. *Linn. Sp. Pl.* 83. *Sm. Fl. Brit.* 65. *Hudf.* 24. *With.* 115. *Hull.* 15. *Curt. Lond. fasc.* 4. *t.* 8.

Gramen paniceum, spicâ divisâ. *Raii Syn.* 394.

GATHERED at Battersea with the two last described. They are all reckoned among our most rare British grasses. They certainly cannot easily be overlooked, especially that now before us, which flowers at the same time with the preceding, and is likewise annual.

Root fibrous. Stems strong, erect or spreading, 2 feet high or more, leafy, striated, smooth. Leaves long and broad, rough, with swelling sheaths, without stipulæ. Spikes erect, twice compound, being formed of spreading branches generally leaning to one side, standing either alternately or in pairs, and each composed of several thick-set lobed spikelets. The com-


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PANICUM ſanguinale.

Cock's-foot Panick-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 3 valves, ſingle-flowered; the third valve very ſmall. *Seed* inveſted with the permanent hardened corolla.

SPEC. CHAR. Spikes finger-like, knotty at the baſe on the inſide. Flowers in pairs, beardleſs. Sheaths of the leaves dotted.

SYN. Panicum ſanguinale. *Linn. Sp. Pl.* 84. *Sm. Fl. Brit.* 66. *Hudſ.* 25. *With.* 115. *Hull.* 15. *Curt. Lond. faſc.* 4. *t.* 7. *Mart. Fl. Ruſt. t.* 78.

Gramen dactylon, latiore folio. *Raii Syn.* 399.

NONE of the places of growth of this graſs mentioned by Britiſh writers is, we believe, ſo conſtantly to be depended on as Batterſea fields, from whence our ſpecimens were collected. In other parts of the kingdom it occurs but ſparingly or occaſionally, as muſt always be the caſe with ſuch annuals (eſpecially graſſes) as grow only in a rich manured ſoil.

The root is fibrous and annual, and the flowers are to be ſeen from July to the end of autumn. Stems numerous, bent and decumbent at their baſe, ſpreading widely upwards, in


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PANICUM dactylon.

Creeping Panick-grass.

TRIANDRIA Digynia.

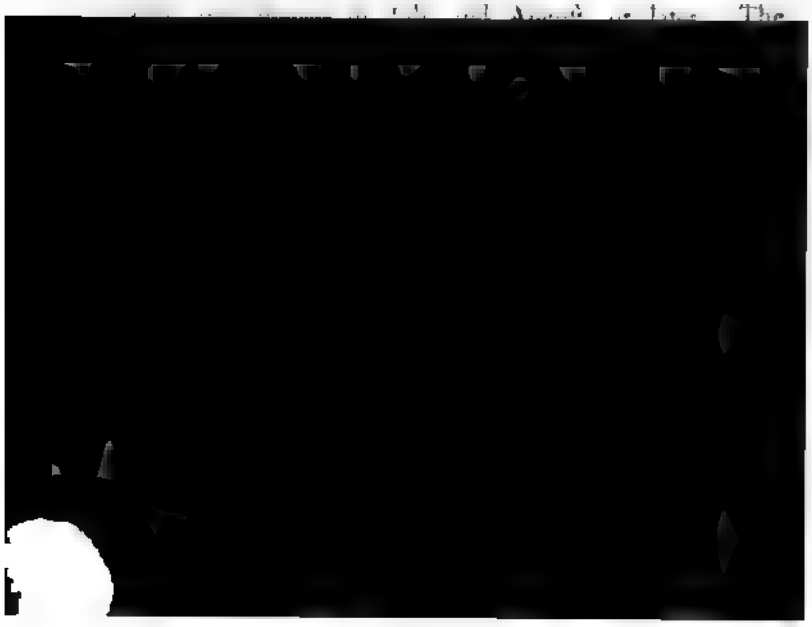
GEN. CHAR. *Cal.* of 3 valves, single-flowered; the third valve very small. *Seed* invested with the permanent hardened corolla.

SPEC. CHAR. Spikes finger-like, hairy at the base on the inside. Flowers solitary. Calyx of two nearly equal valves, contrary to the corolla. Shoots creeping.

SYN. Panicum dactylon. *Linn. Sp. Pl.* 85. *Sm. Fl. Brit.* 67. *Hudf.* 25. *With.* 116. *t.* 21. *Hull.* 15. *Dickf. Dr. Pl.* 53. *H. Sicc. fasc.* 11. 1.

Gramen repens, cum paniculâ graminis Mannæ. *Ruii Syn.* 399.

MR. NEWTON is handed down by Ray as the discoverer of this curious species of *Panicum* on the sandy shores between Penzance and Marketjew, Cornwall, where it has grown copiously ever since. We are indebted to Dr. Pennick of Penzance for wild specimens. It has never been observed in any other part of Great Britain. In the north of Italy it is common in the streets of several towns.



March 1 1804 Published by Jos Sowerby London

PHLEUM pratense.

Common Cat's-tail-grass.

TRIANDRIA Digynia.

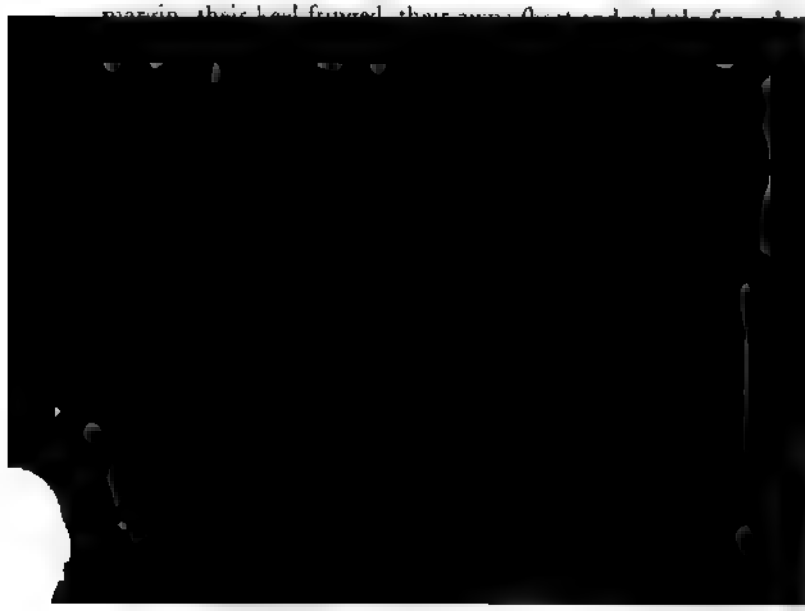
GEN. CHAR. *Cal.* two-valved, abrupt, pointed, sessile, longer than the corolla, single-flowered.

SPEC. CHAR. Spike cylindrical, very long. Glumes fringed at the back, longer than the awns.

SYN. Phleum pratense. *Linn. Sp. Pl.* 87. *Sm. Fl. Brit.* 68. *Hudf.* 25. *With.* 117. *Hull.* 16. *Relh.* 23. *ed.* 2. 24. *Sibth.* 34. *Abbot.* 13. *Mart. Fl. Rust. t.* 5.

Gramen typhinum majus et minus. *Raii Syn.* 398.

COMMON every where in meadows, pastures and waste ground, where its spikes may be found from June to October. The root is perennial, jointed, and more or less creeping. Stems erect, 3 or 4 feet in height, leafy, except in the upper part, striated. Leaves flat, tapering to a point, roughish to the touch, with long, striated, cylindrical sheaths, crowned by a short, blunt stipula. Spike solitary, upright, cylindrical, obtuse, composed of innumerable closely-crowded flowers, and varying from 2 to 4 or 5 inches in length. The calyx-valves are green, or purplish, with pale nerves, and a dilated, white, membranous margin, their keel fringed, their awns short and [illegible]

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PHLEUM alpinum.

Alpine Cat's-tail Grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* two-valved, abrupt, pointed, sessile, longer than the corolla, single flowered.

SPEC. CHAR. Spike ovato-cylindrical. Aristæ about as long as the glumes.

SYN. Phleum alpinum. *Linn. Sp. Pl.* 88. *Dickf. Tr. of Linn. Soc. v.* 2. 288. *With.* 119. *Fl. Dan. t.* 213.

FIRST discovered by Mr. Dickson on mountains near Garway Moor, Scotland, from whence Mr. Don and Mr. Mackay have favoured us with specimens. It is a truly alpine grass, making the principal part of the turf in the most elevated pastures of Switzerland, and probably is to be found in similar situations in more parts than one of our island. It is perennial, and flowers about the end of July.

The root is inclined to be creeping, and a little tuberous. Stem mostly solitary, simple, ascending, about a foot or more in height; leafy below; naked, smooth, striated and very


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PHLEUM paniculatum.
Panicled Cat's-tail-grass.

TRIANDRIA Digynia.

Gen. Char. *Cal.* two-valved, abrupt, pointed, sessile longer than the corolla, single-flowered.

Spec. Char. Panicle cylindrical, resembling a spike. Glumes naked, tumid in their upper part. Stem branched.

Syn. Phleum paniculatum. *Hudf.* 26. *Sm. Fl. Brit.* 70. *With.* 117. *Hull.* 16. *Relh. Suppl.* 1. 8. *ed.* 2. 24.
Phalaris paniculata. *Ait. Hort. Kew. v.* 1. 87. *Sibth.* 34.

THE merit of making this grass known to British botanists certainly belongs to Mr. Hudson, who has given an excellent description of it, though his synonyms are all doubtful at least, and the citation of Linnæus certainly wrong. It is an annual grass occurring, but very rarely, on dry, elevated ground, flowering in July. Mr. Hudson seems to have gathered it near Bristol. Mr. Relhan has sought for it in vain himself in Cambridgeshire. In the Bankshan Herbarium are specimens from Badminton park, Gloucestershire, and Mr. Dawson Turner has communicated it to us from Bedfordshire. The figure is from a garden specimen, compared with wild ones.

Root of several strong short fibres. Stems several, branched, leafy, very smooth. Leaves numerous, upright, roughish, pointed, of a grass-green, not at all glaucous, but investing

PHLEUM Michelii.

Michelian Cat's-tail Grass.

TRIANDRIA Digynia.

Gen. Char. *Cal.* of 2, nearly equal, sharp, taper-pointed valves, single-flowered. *Cor.* of 2 beardless valves, included in the calyx, loosely investing the seed.

Spec. Char. Panicle nearly cylindrical, in the form of a spike. Glumes of the calyx lanceolate, somewhat awn-pointed, strongly fringed, and hairy.

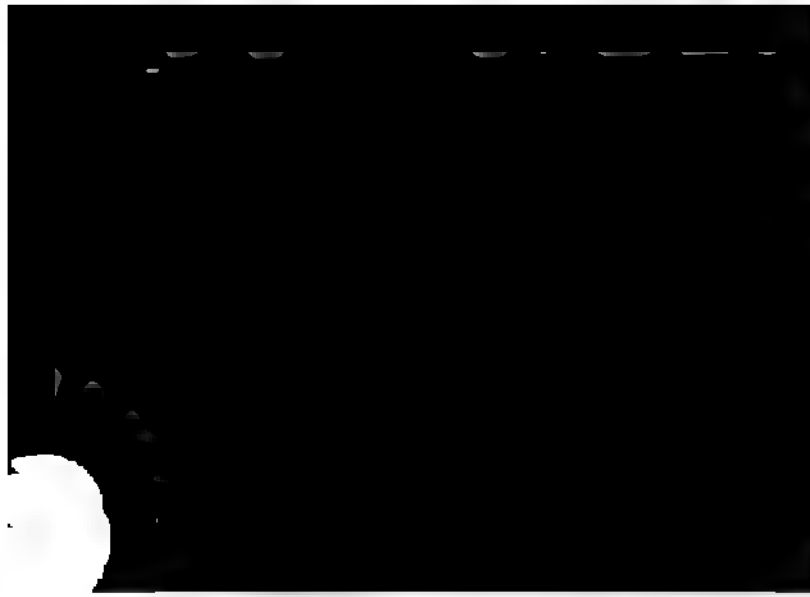
Syn. Phleum Michelii. *Allion. Ped. v.* 2. 233. *Schrad. Germ. v.* 1. 187. *t.* 1. *f.* 2.

P. n. 1532. *Hall. Hist. v.* 2. 246.

Phalaris alpina. *Haënke in Jacq. Coll. v.* 2. 91. *Host. Gram. v.* 2. 26. *t.* 35.

Gramen typhoides alpinum, spicâ graciliori delicatâ et villosâ. *Scheuchz. Agr.* 65. *Hall. Enum.* 10. *n.* 264.

DISCOVERED by Mr. G. Don on rocky parts of the high mountains of Clova, Angusshire. His specimen agrees with authentic Austrian, Swiss and Italian ones, sent us long ago by the various authors who have mentioned this curious alpine grass, except in being less luxuriant, owing probably to its more northern, or more barren, place of growth. So rare an acquisition to our *Flora* cannot but be highly welcome. We



ALOPECURUS pratensis.

Meadow Fox-tail-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing a sin[illegible] floret. *Cor.* of 1 valve.

SPEC. CHAR. Stem erect, smooth. Spike somew[illegible] lobed. Glumes of the calyx hairy, united their base.

SYN. Alopecurus pratensis. *Linn. Sp. Pl.* 88. *S[illegible] Fl. Brit.* 72. *Hudf.* 27. *With.* 119. *Hull.* [illegible] *Relh.* 24. *Sibth.* 34. *Abbot.* 12. *Curt. Lond. fasc.* [illegible] *t.* 5. *Mart. Fl. Rust. t.* 6.

Gramen Alopecuro simile glabrum, cum pilis long[illegible] usculis in spicâ. *Raii Syn.* 396.

A VERY common and extremely valuable grass in rath[illegible] moist and fertile (but neither very wet nor very dry) pastur[illegible] and meadows, flowering in May; for whose properties an[illegible] advantages we must refer our readers to the *Flora Londinens[illegible]* contenting ourselves with summing up the whole in the wor[illegible] of Prof. Martyn. "It undoubtedly possesses the three great [illegible] "quisites of quantity, quality and earliness, in a superior degr[illegible] "to any other."

To distinguish this grass at first sight by its oblong, cylindr[illegible]cal, thick, somewhat silky and grayish spikes is not very di[illegible]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ALOPECURUS alpinus.

Alpine Fox-tail-grafs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, ſingle-flowered. *Cor.* of 1 acute, awned valve.

SPEC. CHAR. Stem erect, ſmooth. Spike ovate. Glumes of the calyx downy, without awns, and nearly as long as the awns of the corolla.

MR. G. DONN has favoured us with this new ſpecies of *Alopecurus*, diſcovered by himſelf on mountains about Loch Nagore in Aberdeenſhire. We find no deſcription to which it can be certainly referred, although that of Profeſſor Vahl's *A. antarcticus*, ſee Wildenow *Sp. Pl. v.* 1. 357, agrees in every point except the length of the *ariſta*, which Vahl deſcribes as twice the length of the calyx, whereas in our plant it is ſcarcely at all longer than the calyx. It is not impoſſible that a graſs of the Straits of Magellan ſhould alſo grow on the mountains of Scotland. Unluckily we want a ſpecimen to decide this point.

A. alpinus has a creeping perennial blackiſh root, with many long fibres. Stem about a foot high, bent at the loweſt joint, then erect, ſimple, leafy, ſmooth in every part. Radical leaves narrow; thoſe on the ſtem broader, ſhort, flat, ſharp-pointed, ſmooth, with long and ſlightly inflated ſheaths.


1126

ALOPECURUS agreſtis.

Slender Fox-tail-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing a ſingle floret. *Cor.* of 1 valve.

SPEC. CHAR. Stem erect, roughiſh. Spike perfectly ſimple, taper. Glumes of the calyx nearly naked, united at their baſe, dilated at the keel.

SYN. Alopecurus agreſtis. *Linn. Sp. Pl.* 89. *Sm. Fl. Brit.* 73. *Hudſ.* 27. *With.* 119. *Hull.* 16. *Relh.* 24. *Sibth.* 35. *Abbot.* 12. *Mart. Fl. Ruſt. t.* 22.

A. myoſuroides. *Curt. Lond. faſc.* 2. *t.* 7.

Gramen myoſuroides n. 1 et 2. *Raii Syn.* 397.

A NATIVE of corn-fields and waſte ground, flowering in July, and the root is annual.

This graſs differs very materially from the Meadow Fox-tail figured in our 759th plate; for as that by its perennial duration, ſituation in meadows and paſtures, and excellent qualities for fodder, may be eſteemed one of the moſt valuable, this on the contrary is rather to be reckoned a weed, exhauſting the ſtrength of arable land to no purpoſe; for, whether it might be acceptable to cattle or not, it cannot be collected for their


848.

ALOPECURUS bulbosus.

Bulbous Fox-tail-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing a single floret. *Cor.* of 1 valve.

SPEC. CHAR. Stem erect. Spike simple, tapering. Glumes of the calyx distinct, downy. Root bulbous.

SYN. Alopecurus bulbosus. *Linn. Sp. Pl.* 1665. *Sm. Fl. Brit.* 73. *With.* 120. *Hull.* 16.

A. geniculatus β. *Huds.* 27.

Gramen myosuroides nodosum. *Dill. in Raii Syn.* 397. *t.* 20. *f.* 2.

THIS grass is found in salt marshes only, nor does it appear to be correctly understood by botanists in general. Hudson asserts that in watery places it becomes the *geniculatus;* but this is so far from being correct that it always grows in watery places. We have preserved it unchanged for several years in a garden by means of shade and moisture. The present spe-

ALOPECURUS geniculatus.

Floating Fox-tail-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing a single floret. *Cor.* of 1 valve.

SPEC. CHAR. Stem ascending, bent at the joints. Spike somewhat compound, cylindrical. Glumes obtuse, hairy.

SYN. Alopecurus geniculatus. *Linn. Sp. Pl.* 89. *Sm. Fl. Brit.* 74. *Huds.* 27. *With.* 120. *Hull.* 16. *Relh.* 25. *Sibth.* 35. *Abbot.* 12. *Curt. Lond. fasc.* 5. *t.* 6. *Mart. Rust. t.* 97.

Gramen aquaticum geniculatum spicatum. *Raii Syn.* 396.

VERY frequent in watery situations, by the sides of ditches and ponds, and most commonly floating to a great extent upon their surfaces, flowering in July.

The root is fibrous and perennial. Stems several, various in length, smooth, branched, with many bent joints, the lowermost of which throw out numerous simple radicles when they float on the water. Leaves much broader and shorter than in the last described, smoothish, with long and some

ALOPECURUS fulvus.

Orange-spiked Fox-tail-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing a single floret. *Cor.* of 1 valve.

SPEC. CHAR. Stem ascending, bent at the joints. Spike compound, cylindrical. Glumes obtuse, hairy. Awn the length of the calyx. Antheræ roundish.

SYN. Alopecurus geniculatus, var. 4. *With.* 121. *Hull.* 16.

WE had never noticed this grass till Mr. Stone communicated it last summer from Swainsthorpe, four miles south of Norwich. The only certain mention of it is to be found in Withering, (for we have great doubts concerning his synonyms,) who suspected it might prove a distinct species, to which we assent without much hesitation.

It grows floating in the water like the common *A. geniculatus, v.* 18. *t.* 1250, but is at first sight very conspicuous on account of the length of its spike, and rich deep orange colour of its antheræ. On a close examination the parts last mentioned are totally different in form from those of the *geniculatus*, being not half so long, nor of a linear shape, but very short, thick, and almost round, deeply cloven at each end, bursting by an oval orifice at each side. When old they turn quite white. The glumes are obtuse, and fringed with very soft hairs. The awn also is peculiarly soft and slender, and not longer than the glumes. The general habit of the plant is much like that of *A. geniculatus*, but larger, and the spike more compound. The form of the antheræ must be considered as its most essential character, as their colour affords its most striking indication at a distance.


2467

KNAPPIA agroſtidea.

Early Knappia.

TRIANDRIA Digynia.

Gen. Char. *Cal.* of 2 obtuſe valves, ſingle-flowered, awnleſs. *Cor.* of 1 hairy, abrupt, awnleſs valve. *Flowers* alternate, on a ſerpentine *rachis.*

Spec. Char. . . . . .

Syn. Agroſtis minima. *Linn. Sp. Pl.* 93. *Sm. Fl. Brit.* 82. *Hudſ.* 32. *With.* 134. *Hull.* 19.

Gramen minimum Anglo-Britannicum. *Raii Syn. Indic. Pl. Dub.*

THE elucidation of a new ſpecies of graſs in the foregoing page, and of a new genus in this, will we hope juſtify our publiſhing more of one tribe in the preſent number than uſual. Many botaniſts have doubted the propriety of referring the preſent plant to *Agroſtis*, and our own ſuſpicions reſpecting it have at length been confirmed by the opinion of J. L. Knapp, Eſq. F.L.S. whoſe Hiſtory of Britiſh Graſſes, now preparing for the preſs, and illuſtrated with moſt accurate figures, drawn by himſelf from every ſpecies in its native ſituation, will abundantly juſtify our giving his name to the genus we have agreed with him to eſtabliſh.

This curious little graſs very rarely occurs. It grows in ſandy maritime paſtures, flowering in March and April. The Rev. Mr. Davies, to whom we are obliged for wild ſpecimens

Feb. 1 1803. Published by Jas. Sowerby, London

MILIUM effusum.

Spreading Millet-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, single-flowered, turnid. *Seed* invested with the permanent hardened corolla.

SPEC. CHAR. Flowers loosely panicled, awnless.

SYN. Milium effusum. *Linn. Sp. Pl.* 90. *Sm. Fl. Brit.* 75. *Hudf.* 29. *With.* 122. *Hull.* 7. *Relh.* 26. *Sibth.* 35. *Abbot.* 13. *Curt. Lond. fasc.* 4. *t.* 12.

Gramen miliaceum. *Raii Syn.* 402.

AN elegant grass, not unusual in moist shady places, flowering in June and July.

The root is fibrous, bearing one or more stems, and throwing out several procumbent shoots that produce radicles from their joints. Hence the plant appears to be, as Linnæus and Curtis assert, perennial; and having never cultivated it, we have no solid grounds for supporting a contrary opinion. nevertheless, several truly annual plants, as *Poa annua* and some species of *Polygonum*, do take fresh root during the summer in a similar manner, and it only remains to be examined whether these offsets of the *Milium* flower the same

MILIUM lendigerum.
Panick Millet-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, single-flowered, tumid. *Seed* invested with the permanent hardened corolla.

SPEC. CHAR. Panicle close and spiked. Corolla awned.

SYN. Milium lendigerum. *Linn. Sp. Pl.* 91. *Sm. Fl. Brit.* 76. *With.* 122. *Hull.* 17.

Agrostis australis. *Linn. Mant.* 1. 30.

A. rubra. *Hudf. ed.* 1. 26.

A. ventricosa. *Gouan. Hort.* 39. *t.* 1. *f.* 2.

Alopecurus ventricosus. *Hudf. ed.* 2. 28.

Panicum serotinum arvense, spicâ pyramidatâ. *Raii Syn.* 394.

IT is difficult to draw a line between the characters of *Milium* and *Agrostis*, nor is the Linnæan definition of the latter correct; hence there will be found in the *Fl. Brit.* a contrariety between that definition (too incautiously adopted) and the particular descriptions copied from nature. If the corolla of *Agrostis* be described *membranous*, instead of "larger than the calyx," it will probably remove the difficulty. The grass now before us Linnæus has unconsciously mentioned under both genera. We consider it as a *Milium*, because the corolla hardens as the fruit ripens, and closely enfolds it; in

AGROSTIS Spica venti.

Silky Bent-grafs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, fingle-flowered. *Cor.* of 2 unequal valves, larger than the calyx. *Stigmas* feathery.

SPEC. CHAR. Exterior petal furnifhed with a ftraight ftiff and very long awn, inferted below the fummit. Panicle fpreading.

SYN. Agroftis Spica venti. *Linn. Sp. Pl.* 91. *Sm. Fl. Brit.* 77. *Hudf.* 30. *With.* 126. *Hull.* 18. *Relh.* 26. *Abbot.* 14.

Gramen miliaceum majus, glumis ariftatis, fpadiceis et pallidis. *Raii Syn.* 405.

GATHERED by Mr. Groult in July laft between Kennington and Camberwell. It is by no means a common grafs, but is chiefly to be looked for in fandy corn-fields that are occafionally inundated, where its ample fhining panicles, elegantly waving in the wind, betray it at a confiderable diftance.

Root annual, formed of numerous crooked fibres, peculiarly thick at their origin. Stems [illegible] 2 or 3 feet high, leafy,


951

AGROSTIS canina.

Brown Bent-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, single-flowered. *Cor.* of 2 unequal membranous valves. *Stigmas* feathery.

SPEC. CHAR. Calyx ovate, coloured, with one valve rough. Corolla naked, with a dorsal incurved awn. Stems prostrate, somewhat branched.

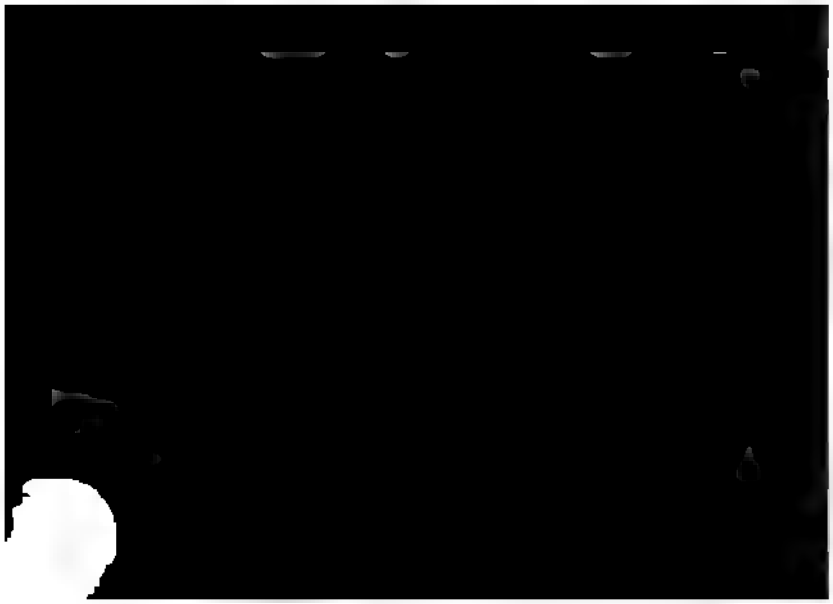
SYN. Agrostis canina. *Linn. Sp. Pl.* 92. *Sm. Fl. Brit.* 78. *Huds.* 30, *α*. *Relh.* 26. *Sibth.* 36. *Abbot.* 14. *Knapp t.* 21.

A. vinealis. *With.* 127. *Hull.* 18.

BY no means rare in damp fields, boggy places, or ditches, flowering the end of June or beginning of July.

Root perennial, creeping, its fibres downy. Stems several, forming a dense tuft, creeping and prostrate except the flowering part, which grows ascending or erect. Leaves narrow,


1656.



AGROSTIS panicea.
Bearded Bent-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, single-flowered. *Cor.* of 2 unequal membranous valves. *Stigmas* feathery.

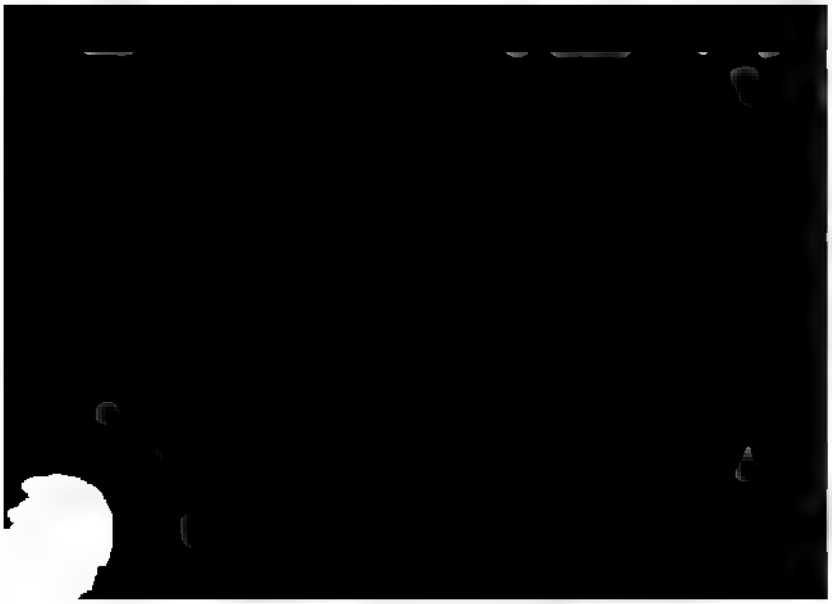
SPEC. CHAR. Panicle spiked, dense, lobed and subdivided. Calyx-valves linear-lanceolate, rough, with long capillary awns. Corolla with a terminal awn. Stem upright. Root fibrous.

SYN. Agrostis panicea. *Ait. Hort. Kew. v.* 1. 94.
A. triaristata. *Knapp. t.* 23.
Phleum crinitum. *Schreb. Gram.* 151. *t.* 20. *f.* 3. *Sm. Fl. Brit.* 71. *Sm. Prodr. Fl. Græc. Sibth. v.* 1. 42.
Alopecurus aristatus. *Huds.* 28.
A. monspeliensis et paniceus. *Linn. Sp. Pl.* 89, 90. *With.* 121. *Hull.* 16, 17.
A. maxima anglica. *Raii Syn.* 396.

IF any department of botany requires circumspection and frequent revision and correction, the genera of grasses are in that predicament. I submit to the opinion of Mr. Knapp, which was originally that of the great Solander, founded on the habit of this grass, and strengthened by the analogy of *Agrostis littoralis, v.* 18. *t.* 1251, in removing it from *Phleum* to that genus, and have hinted at the propriety of this measure in the *Prodromus Fl. Græcæ* just published. I cannot however adopt a new specific name, which applies equally well to *A. littoralis*, when a better is already in print in the *Hortus Kewensis*.

A. panicea occurs here and there in moist maritime situations. It was sent us from the northern coast of Norfolk by Mr. W. Borrer. It is annual, flowering late in the autumn, and varies much in size according to accidental circumstances. Hence Linnæus has described it twice over. The root is small and fibrous. Stems one or more, upright or ascending, very smooth, leafy. Leaves rough-edged, with long smooth sheaths. Stipula oblong, rough at the back. Panicle pale, dense, lobed and branched, of innumerable flowers, the long shining rough awns of whose calyx-valves give the whole a peculiar silky appearance. The awn of the corolla is much shorter. The calyx-valves, though acute, are cloven, owing to the insertion of the awns.


1704



AGROSTIS littoralis.

Sea-side Bent-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, single-flowered. *Cor.* of 2 unequal membranous valves. *Stigmas* feathery.

SPEC. CHAR. Calyx-glumes linear-lanceolate, awned. Corolla smooth, with a straight nearly terminal awn. Stems decumbent.

SYN. Agrostis littoralis. *Sm. Fl. Brit.* 78. *With.* 129? *Hull.* 18? *Dicks. H. Sicc. fasc.* 16. 1.

THIS curious *Agrostis*, distinguished from all other British species by its awned calyx, was first found in salt marshes near Cley, Norfolk, by the Rev. Mr. Bryant, in company with Mr. Rose and others, so long ago as August 1777. It was sent to Sir J. Banks and Dr. Solander, the latter of whom described and named it. Some of the original specimens are now before me; but that in the annexed plate was gathered by Mr. George Jackson, in August 1803, near the powder magazine 4 miles from Woolwich. Mr. Dickson found the same on the Essex coast. Dr. Withering has been very unfortunate in his information respecting this plant, and has figured and


1951

7.

AGROSTIS setacea.

Bristle-leaved Bent-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, single-flowered. *Cor.* of 2 unequal membranous valves. *Stigmas* feathery.

SPEC. CHAR. Calyx lanceolate. Corolla with a bent awn from its base. Radical leaves bristle-shaped.

SYN. Agrostis setacea. *Curt. Lond. fasc.* 6. *t.* 12. *Sm. Fl. Brit.* 79.

A. alpina. *With.* 128. *Hull.* 18.
A. canina, β et γ. *Huds.* 30, 31.
A. mutabilis. *Sibth.* 36?

THE first knowledge we ever had of this grass was from the late Earl of Gainsborough, who brought it from Hampshire. Mr. Curtis mentions it as very common in the south-west counties. It grows on dry barren turfy heaths, flowering in July and August, and though probably eaten by sheep, is con-

AGROSTIS vulgaris.

Fine Bent-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, single-flowered. *Cor.* of 2 unequal membranous valves. *Stigmas* feathery.

SPEC. CHAR. Panicle spreading; with divaricated capillary branches. Calyx-valves equal. Inner petal obtuse, half as long as the other.

SYN. Agrostis vulgaris. *With.* 132. *Sm. Fl. Brit.* 79. *Hull.* 19. *Relh.* 27. *Knapp, t.* 26 *and* 115.
A. tenuis. *Sibth.* 36.
A. capillaris. *Abbot.* 14.
A. polymorpha α. *Huds.* 31.
Gramen miliaceum locustis minimis, paniculâ ferè arundinaceâ. *Raii Syn.* 402.

THIS grass, common in July and August in pastures, fields, and on banks by road sides, was always taken for *A. capillaris* of Linnæus, till his Herbarium came amongst us. See *Pl. Ic. ex Herb. Linn. t.* 54, where the true plant of that name is figured, specimens of which from Portugal I have lately received from


1671

AGROSTIS stolonifera.

Creeping Bent-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, single-flowered. *Cor.* of 2 unequal membranous valves. *Stigmas* feathery.

SPEC. CHAR. Panicle close. Stem branched, creeping. Flowers crowded. Calyx-valves lanceolate, rough.

SYN. Agrostis stolonifera. *Linn. Sp. Pl.* 93. *Sm. Fl. Brit.* 80. *With.* 131. *Hull.* 19. *Reth.* 27. *Sibth.* 36. *Abbot.* 14. *Mart. Rust. t.* 120.

A. polymorpha δ. *Huds.* 31.

Gramen montanum miliaceum minus, radice repente. *Raii Syn.* 402?

G. caninum supinum. *Ger. em.* 26.

GATHERED near Liverpool by Mr. John Shepherd, in wet situations on a clay soil near the shore of the Mersey. We have chiefly seen it in maritime situations. It flowers in July.

The roots are perennial, with downy fibres, and throw out long procumbent round hard and smooth stems which

AGROSTIS alba.

Marsh Bent-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 acute valves, single-flowered. *Cor.* of 2 unequal membranous valves. *Stigmas* feathery.

SPEC. CHAR. Panicle loose. Stem creeping. Calyx-valves equal, lanceolate, polished, rough at the keel.

SYN. Agrostis alba. *Linn. Sp. Pl.* 93. *Sm. Fl. Brit.* 81. *With.* 129. *Hull.* 18. *Relh.* 27. *Sibth.* 37. *Abbot.* 14.
A. polymorpha ζ, palustris. *Huds.* 32.
Gramen miliaceum majus, paniculâ spadiceâ, et paniculâ viridi. *Dill. in Raii Syn.* 404.
β. Agrostis sylvatica. *Huds. ed.* 1. 28. *Linn. Sp. Pl.* 1665.
Gramen miliaceum sylvestre, glumis oblongis. *Dill. in Raii Syn.* 404.

NOT rare in ditches and marshy fields. The flowers appear in July. The root is perennial. Stems several, spreading, prostrate, or floating, often throwing out fibres from their lower joints; leafy about their middle; naked and smooth above. They vary from 1 to 3 feet in length. Leaves rough, with smooth sheaths. Stipula obtuse, often torn. Panicle


1189
July 1 1803 Published by Jas Sowerby, London

A I R A criſtata.

Creſted Hair-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of two valves, two-flowered. *Cor.* of two valves. *Florets* without any imperfect one between them.

SPEC. CHAR. Panicle ſpiked. Calyx longer than its flower-ſtalk. Petals ſharp-pointed, unequal.

SYN. Aira criſtata. *Linn. Sp. Pl.* 94. *Sm. Fl. Brit.* 83 *Hudſ.* 33.

Poa criſtata. *With.* 145. *Hull.* 22. *Relh.* 37 *Sibth.* 42. *Abbot.* 19.

Gramen pumilum hirſutum, ſpicâ purpureo-argenteâ molli. *Raii Syn.* 396.

IN dry calcareous barren paſtures, or on walls, but not very frequent, nor is it a graſs generally well underſtood. Mr. Salt communicated it from the wild romantic rocks of Middleton-dale, Derbyſhire. It is perennial, and flowers about July or Auguſt.

Root of many ſimple downy fibres, crowned with a thick tuft of leaves. Stems ſimple, erect, about ſix inches high, ſmooth, purpliſh, moſt leafy below. Leaves linear, ſmooth, a little rigid, with a ſhort ſtipula, and a long ſheath which is

AIRA aquatica.

Water Hair-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered. *Cor.* of 2 valves. *Florets* without any imperfect one between them.

SPEC. CHAR. Panicle spreading. Flowers awnless, smooth, obtuse, longer than the calyx. Leaves flat.

SYN. Aira aquatica. *Linn. Sp. Pl.* 95. *Sm. Fl. Brit.* 84. *Huds.* 33. *With.* 135. *Hull.* 20. *Relh.* 28. *Sibth.* 38. *Abbot.* 15. *Curt. Lond. fasc.* 1. *t.* 5. *Knapp t.* 29. *Ehrh. Cal.* 4.

Poa dulcis. *Salisb. Prod.* 20.

Gramen miliaceum aquaticum. *Raii Syn.* 402.

FREQUENT in ditches and about the margins of ponds and rivers, flowering in May or June.

The root is creeping, perennial, with long white shining fibres, throwing up very long, branched, leafy stems which float upon the water, their long flaccid linear leaves being many of them, closely applied to its surface, as in *Poa fluitans t.* 1520. The flowering part of the stem is erect, ending in a large, spreading, smooth, purple panicle, with a stoutish main stem, and numerous, unequal, slender, half-whorled branches. Calyx-leaves unequal, purple, much dilated upwards, notched or angular, one or both furnished with 3 ribs. Florets longer than the calyx, one of them on a stalk. Their glumes equal, obtuse; the outer ones 3-ribbed and somewhat plaited, smooth, beardless; the inner with 2 very prominent ribs or angles. Antheræ large, deep yellow. The flowers abound with honey.

A dwarf upright variety, not 3 inches high, was sent us from Park-gate, Cheshire, by the Rev. T. Gisborne.


1587
Engraved, Published by Jos. Sowerby, London.

AIRA cæspitosa.

Turfy Hair-grass.

TRIANDRIA Digynia.

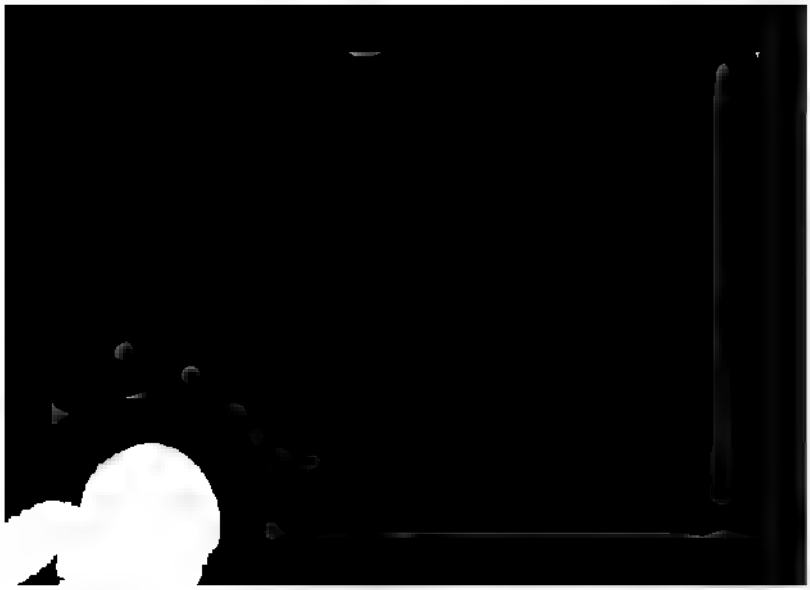
GEN. CHAR. *Cal.* of 2 valves, 2-flowered. *Cor.* of 2 valves. *Florets* without any imperfect one between them.

SPEC. CHAR. Leaves flat. Panicle spreading. Petals awned, hairy at the base. Awn straight, short.

SYN. Aira cæspitosa. *Linn. Sp. Pl.* 96. *Sm. Fl. Brit.* 84. *Huds.* 34. *With.* 136. *Hull.* 20. *Relh.* 28. *Sibth.* 38. *Abbot.* 15. *Knapp. t.* 33.
Gramen miliaceum segetale majus. *Raii Syn.* 403.

NOT unfrequent in moist shady and hilly places, where it forms large tufts, flowering in June and July. It may occasionally be found about the borders of such corn-fields as are wet and shady, but not so generally as to justify the epithet *segetale*, given by the old authors, and which seems to have originated in some confusion between this grass and *Agrostis Spica-venti*, *t.* 951. Mr. Knapp however informs us that "no plant is so universal in all situations in Scotland as this *Aira*."


1453



AIRA lævigata.

Smooth-sheathed Hair-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered. *C* valves. *Florets* without any imperfect one b them.

SPEC. CHAR. Leaves flat; with very smooth s Panicle close. Petals awned, hairy at th Partial stalk smooth and very short.

COMMUNICATED by Mr. George Don, who fou the high mountains of Clova, in Angusshire, as w the sea-side near Dundee, and who first distinguished *A. cæspitosa, t.* 1453, of which Linnæus, who had t from Lapland, thought it a viviparous variety. Mr and Mr. Hooker have also noticed this grass on Ben by Loch Long, and other Highland mountains. As to Mr. Don's remark, it is not viviparous by the sea- is perennial, flowering in May or June.

The differences observed by Mr. Don, between th and the *cæspitosa*, are, that it is never above half even when cultivated; and that the sheaths and back leaves are remarkably smooth. The most essential d however we find in the *rachis*, or partial stalk, which one of the florets, and which is extremely short a smooth, though at the very base of the outer valv corolla there is a small tuft of hairs. In *A. cæsp* whole *rachis* is hairy, and twice or thrice as long.

It is curious to observe, in the viviparous florets, th transformation of the glumes into leaves, evinced by remaining at the top; or rather the base of the awn ite in the flower before us, is become leaf, while th seems little altered. The other glume, which had no quite changed to a leaf. The organs of impregna obliterated here, but in some cases they may possibly leaves also.

2

ARIA flexuosa.

Waved Mountain Hair-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered. *Cor.* of 2 valves. *Florets* without any imperfect one between them.

SPEC. CHAR. Leaves bristle-shaped. Stem almost naked. Panicle spreading, three-forked; its branches wavy. Awns bent.

SYN. Aira flexuosa. *Linn. Sp. Pl.* 96. *Sm. Fl. Brit.* 85. *Huds.* 34. *With.* 136. *Hull.* 20. *Relh.* 29. *Sibth.* 38. *Abbot.* 15.

Gramen paniculatum, locustis parvis, purpureo-argenteis, majus et perenne. *Raii Syn.* 407.

A NATIVE of dry elevated turfy or sandy heaths in all parts of Britain, flowering in July.

The root is perennial, consisting of long fibres; and in sandy ground more especially those fibres are woolly. We have observed woolly roots to be common in grasses, whether annual or perennial, that grow in sand. Stem 12 or 18 inches high, with one knot near the base, erect, smooth, almost naked, of a brown or purplish hue. Leaves short, slender, rough-edged, with a broad sheathing purplish base. Stipula short, obtuse, cloven. Panicle loose and spreading, three-forked, rough, remarkable for its shining brown colour, and still more for its crisped or wavy branches. The flowers stand upright on straight alternate stalks. Glumes shining, variegated with brown, green, and a silvery white, all nearly equal in length, jagged at the point. Florets 2, hairy at the base, one of them a little elevated. Awns from the back of the corolla, bent and twisted when dry, rising a little above each floret.

We are almost persuaded, by the remarks of our friend Mr. Knapp, that the two varieties mentioned in *Fl. Brit.* may form a distinct species, which Hudson first described by the name of *setacea*.

Nov. 1 1818 Published by Jas. Sowerby, London

AIRA canescens.

Grey Hair-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered. *Cor.* of 2 valves. *Florets* without any imperfect one between them.

SPEC. CHAR. Leaves slender and tapering. Stem leafy. Panicle dense. Awns swelling upwards, scarcely longer than the calyx.

SYN. Aira canescens. *Linn. Sp. Pl.* 97. *Sm. Fl. Brit.* 86. *Huds.* 36. *With.* 137. *t.* 24. *Hull.* 20. *Dicks. Dr. Pl.* 4.

Gramen miliaceum maritimum molle. *Dill. in Raii Syn.* 405.

A NATIVE of sandy pastures near the sea, but we know not that it has been found on any other than the eastern coasts. On Yarmouth Denes it abounds, as well as in similar stations on the opposite Dutch shore. It flowers in July and August, and is perennial.

The roots consist of long capillary fibres, and produce thick tufts of upright, stiff, bristle-shaped, glaucous leaves, often tinged with a purplish hue, evidently rough when examined with a microscope. Among these spring up several stems, various in height and direction, with many bent reddish joints

July 1 1803 Published by Jas Sowerby London

A I R A præcox.

Early Hair-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered. *Cor.* of valves. *Florets* without any imperfect one betwe them.

SPEC. CHAR. Leaves slender and tapering, with angul sheaths. Panicle spike-shaped. Florets sessile, near naked at their base, awned at the back.

SYN. Aira præcox. *Linn. Sp. Pl.* 97. *Sm. Brit.* 87. *Huds.* 36. *With.* 137. *Hull.* 20. *Relh.* 29. *Sibth.* 39. *Abbot.* 15. *Curt. Lond. fasc.* 3. *t.* 7. *Dicks. H. Sicc. fasc.* 4. 4.

Gramen parvum præcox, paniculâ laxâ canescente. *Raii Syn.* 407. *t.* 22. *f.* 2.

COMMON on dry gravelly ground in the spring, flowering in May or early in June, and soon after withering away.

Root fibrous, annual. Stems several, 2 or 3 inches high, straight, leafy, very smooth. Leaves bristle-shaped; the radical ones short, and soon fading; the rest furnished with long, angular, ribbed, smooth, more or less inflated, sheaths. Stipula blunt. Panicle small, erect, dense, but little subdivided. Flowers upright, shining, prettily variegated with green and white. Calyx of 2 equal glumes, rough at the

AIRA caryophyllea.

Silver Hair-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered. *Cor.* of 2 valves. *Florets* without any imperfect one between them.

SPEC. CHAR. Leaves slender and tapering. Branches of the panicle ternate, spreading. Florets sessile. Awn from the back of the corolla, twisted.

SYN. Aira caryophyllea. *Linn. Sp. Pl.* 97. *Sm. Fl. Brit.* 88. *Hudf.* 36. *With.* 138. *Hull. Relh.* 32. *Sibth.* 39. *Abbot.* 16. *Curt. Lond. fasc. 1.* 6. *Dickf. H. Sicc. fasc.* 4. 5.

Gramen paniculatum, locustis parvis purpuro-argenteis, annuum. *Raii Syn.* 407.

THIS pretty grass, with its elegant silvery panicles, frequently ornaments the most barren sandy or gravelly fields and hills, flowering about June or early in July, after which it is soon dried up, the root being annual and very small, little calculated to resist drought.

From one root arise several spreading slender stems about span high, smooth and leafy. The radical leaves soon wither those on the stem are narrow and tapering, with long sheaths and lanceolate longish stipulæ. Panicle very slender and hair-


812
Published Dec


1169

HOLCUS mollis.

Creeping Soft-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered; one of the flowers with an imperfect germen. *Cor.* of 2 valves; the outer one awned.

SPEC. CHAR. Calyx-glumes nearly equal, partly naked. Hermaphrodite floret lowest and beardless: male with a sharply bent awn. Root creeping.

SYN. Holcus mollis. *Linn. Sp. Pl.* 1485. *Sm. Fl. Brit.* 89. *Huds.* 440. *With.* 135. *Hull.* 225. *Relh.* 30. *Sibth.* 40. *Abbot.* 217. *Curt. Lond. fasc.* 5. *t.* 8. *Dicks. H. Sicc. fasc.* 9. 17.

Gramen miliaceum aristatum molle. *Raii Syn.* 404.

THIS *Holcus* is much less frequent than the preceding, and grows in a different kind of situation, preferring shady copses and hedges. It flowers in July and is perennial, the widely creeping root indeed being very difficult of extirpation, and affording one of the most evident marks to distinguish it from *H. lanatus*. To which may be added that the *mollis* is com-

May 1 1803

HOLCUS avenaceus.

Oat-like Soft-grafs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, 2-flowered; one o[illegible] the flowers with an imperfect germen. *Cor.* o[illegible] 2 valves; the outer one awned.

SPEC. CHAR. Calyx-glumes unequal, fmooth. Her[illegible]maphrodite floret a little elevated, fcarcely awned [illegible]: male with a bent awn. Root knotty.

SYN. Holcus avenaceus. *Sm. Fl. Brit.* 90. *Sibth.* 4[illegible].
Avena elatior. *Linn. Sp. Pl.* 117. *Hudf.* 5[illegible]3. *With.* 163. *Hull.* 26. *Relh.* 48. *Abbot.* 2[illegible]5. *Curt. Lond. fafc.* 3. *t.* 6. *Mart. Fl. Ruft. t.* 7.
Gramen nodofum, avenaceâ paniculâ. *Raii Syn.* 40[illegible]5.

FREQUENT in bufhy places, hedges, and by road-fide[illegible], flowering in June and July.

The root is perennial, formed generally of two knots [illegible] fwoln joints, one above another, throwing out downy fibre[illegible]. Stem upright, 3 feet high, ftraight, unbranched, leafy, fmoot[illegible], confifting of about 3 joints. Leaves of a darkifh gree[illegible], fpreading, flat, rough and rather harfh. Stipula fhort, abru[illegible]

Aug.

MELICA uniflora.

Wood Melic-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, with about 2 flowers, and the rudiment of another between them. *Cor.* of 2 valves.

SPEC. CHAR. Petals beardless. Panicle drooping toward one side, branched. Flowers erect. Calyx containing only one perfect floret.

SYN. Melica uniflora. *Sm. Fl. Brit.* 91. *With.* 139. *Hull.* 21. *Relh. Suppl.* 1. 8. *Sibth.* 40. *Abbot.* 16. *Curt. Lond. fasc.* 5. *t.* 10. *Dicks. H. Sicc. fasc.* 8. 6. *Mart. Rust. t.* 64.

M. nutans, *Hudf.* 37.

M. Lobelii. *Villars. Dauph. v.* 1. 89. *t.* 3.

Gramen avenaceum nemorense, glumis rarioribus ex fusco xerampelinis. *Raii Syn.* 403.

NOT uncommon in groves and thickets, where its red blossoms, suspended by capillary and almost invisible stalks, seem like insects dancing in the air. It flowers in May or early in June, and is perennial.

Root fibrous or somewhat creeping. Stem a foot and half


1058


1059

6.

MELICA cærulea,

Purple Melic-grass.

TRIANDRIA Digynia.

Gen. Char. *Cal.* of 2 valves, with about 2 flowers, and the rudiment of another between them. *Cor.* of 2 valves.

Spec. Char. Petals acute, beardless. Panicle dense. Flowers erect, cylindrical.

Syn. Melica cærulea. *Linn. Mant.* 2. 325. *Sm. Fl. Brit.* 93. *With.* 139. *Hull.* 21. *Relb.* 32. *Sibth.* 39. *Abbot.* 16. *Curt. Lond. fasc.* 5. *t.* 11.

Aira cærulea. *Linn. Sp. Pl.* 95. *Hudf.* 33.

Gramen pratense serotinum, paniculâ longâ purpurascente. *Raii Syn.* 404.

FREQUENT in the most barren sandy boggy places, especially about pools upon mountainous heaths, flowering in August, and varying in height from 6 to 18 inches, according to the nourishment it meets with.

Root perennial, of many strong fibres. Whole herb harsh, rigid, rather glaucous. Stems with a sort of bulb at their base, and one joint a little above it. Leaves upright, sharp-

SESLERIA cærulea.

Blue Moor-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing about 3 florets. *Cor.* of 2 valves; the inner cloven; the outer (mostly) with 3 teeth. *Styles* united at their base.

SPEC. CHAR. Spike ovate-oblong, imbricated. Bracteas alternate. Outer petals with three teeth.

SYN. Sesleria cærulea. *Scop. Carn. ed.* 2. *v.* 1. 63. *Sm. Fl. Brit.* 94. *With.* 140. *Hull.* 21. *Knapp. t.* 43.

Cynosurus cæruleus. *Linn. Sp. Pl.* 106. *Huds.* 59. *Dicks. H. Sicc. fasc.* 6. 3. *Mart. Rust. t.* 20. *Jacq. Misc. v.* 2. 66. *Ic. Rar. v.* 1. *t.* 21.

Gramen parvum montanum, spicâ crassiore purpuro-cæruleâ brevi. *Raii Syn.* 399.

THIS rare mountain grass grows chiefly in the clefts of calcareous rocks in elevated situations, flowering in the early part of summer. We have received it from different parts of Westmoreland, in which neighbourhood it more frequently occurs than in any other in England, though Mr. Knapp mentions it as common on the Scottish alps. The spike varies in colour, but some of our native ones are as blue as any from abroad.

The root is perennial, tufted, very long. Stem about a span high, simple, without joints, smooth, naked except at the base. Leaves linear, obtuse, recurved, keeled, rough-edged: their sheaths short, tubular, compressed, with a very minute stipula. Spike terminal, solitary, of a shining grey or blue, with solitary, jagged, membranous bracteas at the base of some of the lowermost spikelets. Spikelets mostly in pairs, 2- or 3-flowered. Calyx-valves nearly equal, with short awns. Petals ribbed; the outer with 3 teeth, the middlemost slightly awned; inner with 2 teeth; all the ribs are fringed. Stigmas threadshaped, rough. Styles joined at their lower part.

Dr. Sibthorp found near Constantinople a new species nearly akin to this, but with a white spike, and the outer petals undivided.


1613

48.

POA aquatica.

Reed Meadow-grass.

TRIANDRIA Digynia.

Gen. Char. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

Spec. Char. Panicle upright, branched, loose. Spikelets linear, of about six florets, which are obtuse and seven-ribbed.

Syn. Poa aquatica. *Linn. Sp. Pl.* 98. *Sm. Fl. Brit.* 9[illegible]5. *Huds.* 38. *With.* 140. *Hull.* 21. *Relh.* 32. *Sibth.* [illegible] 1. *Abbot.* 17. *Curt. Lond. fasc.* 5. *t.* 12.

Gramen aquaticum majus. *Raii Syn.* 411.

Very common in ditches and about the margins of clear rivers and pools, flowering in July.

Root perennial, creeping, white. Stems several, upright, often 6 feet high, leafy, a little compressed, smooth, striated, their lower joints throwing out whorled roots. Leaves sword-shaped, broad, flat and straight, rough on the edges and keeled, with a very short blunt stipula. Panicle large and much branched, upright, but the branches spread loosely in every direction, being alternately half whorled. They are slender, angular and rough. Spikelets linear, compressed, of 6 florets


1816

POA fluitans.

Floating Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle branched, spreading. Spikelets close-pressed; cylindrical, many-flowered. Florets obtuse, with seven ribs and intermediate ones at the base.

SYN. Poa fluitans. *Scop. Carn. v.* 1. 73. *Salisb. Prod.* 21. *Sm. Fl. Brit.* 96. *Relh.* 32.

Festuca fluitans. *Linn. Sp. Pl.* 111. *Huds.* 46. *With.* 156. *Hull.* 24. *Sibth.* 45. *Abbot.* 21. *Curt. Lond. fasc.* 1. *t.* 7. *Mart. Rust. t.* 113.

Gramen aquaticum cum longissimâ paniculâ. *Raii Syn.* 412.

FREQUENT in stagnant waters, or about the margins of slow streams, flowering throughout the summer.

Root long and creeping, throwing out many fibres at the joints, its upper part floating in the water. Stems solitary from each joint, ascending, round, striated, leafy, smooth, hollow and tender. Leaves flat, broad, obtuse, smooth; the lower ones floating; all with long, compressed, smooth sheaths. Stipulæ short, pointed, often torn. Panicle nearly upright, smooth, pale, with alternate, more or less spreading, branches. Spikelets alternate, nearly sessile, close-pressed to the branches, linear, cylindrical, with from 8 to 12 florets. Calyx unequal, membranous, obtuse, with a green keel, and no ribs nor furrows. Florets loosely spiked, somewhat cylindrical, obtuse, roughish under a high magnifier, 7-ribbed, with short intermediate ribs at the bottom, their summit membranous, white, and mostly toothed: inner valves notched. Antheræ short and round.

The seeds are said to be collected for food in Holland, and called *Manna Seeds.*—See Curtis.


1650

POA distans.

Reflexed Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle branched, lax; its branches at length reflexed. Spikelets of five obtuse, polished, slightly five-ribbed florets.

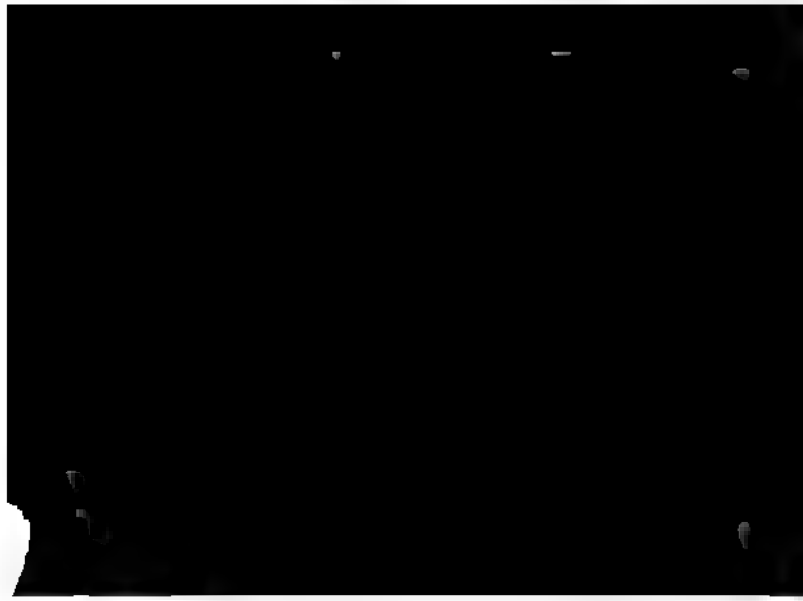
SYN. Poa distans. *Linn. Mant.* 32. *Sm. Fl. Brit.* 97. *With.* 141. *t.* 25. *Hull.* 21. *Abbot.* 19.

P. retroflexa. *Curt. Lond. fasc.* 6. *t.* 10.

Aira aquatica β. *Hudf.* 34.

THE first British writer who well knew this grass was unquestionably the author of the *Flora Anglica*, though he erred with Linnæus in making it a variety of the very different *Aira aquatica*. Mr. Curtis, by means of a good figure and description, has now cleared it from all obscurity. It is perennial, flowering in July and August, and may be found in most sandy waste places towards the coast (not absolutely on the beach) and even by the road up Hampstead hill.


906



51.

POA maritima.

Creeping Sea Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle branched, rather close. Spikelets of five bluntish, cylindrical, slightly five-ribbed florets. Root creeping.

SYN. Poa maritima. *Hudf.* 42. *Sm. Fl. Brit.* 97. *With.* 147. *Hull.* 22. *Lightf.* 98. *Relh.* 32. *Dickf. H. Sicc. fasc.* 11. 2.

Gramen paniculatum maritimum vulgatissimum. *Raii Syn.* 409.

GATHERED by Mr. Groult at Southampton, September 15 last. It is not unfrequent in marshy places on the seacoast, flowering from July to October, and is perennial.

The root creeps, by which this differs from *P. distans* *v.* 14. *t.* 986, which is moreover less strictly a maritime plant.

[redacted]

P O A procumbens.

Procumbent Sea Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many flore[redacted]. *Spikelet* inclining to ovate; glumes ovate, point[redacted]d beardless.

SPEC. CHAR. Panicle lanceolate, pointing one w[redacted] condensed, rough; its common stalk round; spil[redacted]e lets about five-flowered; florets bluntish, ribbe[redacted].

SYN. Poa procumbens. *Curt. Lond. fasc.* 6. *t.* 11.
P. rupestris. *With.* 146. *t.* 26.

MR. CURTIS first discovered this *Poa*, at the foot of St. Vincent's rocks near Bristol, and has figured it from one of his garden specimens. Sir Thomas Frankland, Bart. to whom we are obliged for this wild one, has found the same grass plentifully on waste ground, which is frequently overflowed, near the floating dock in that neighbourhood, and also on the pier at Scarborough, within the spray of the sea. It flowers in July and August.

Root annual, fibrous. Whole plant glaucous. Stems several, more or less prostrate, about a span long, leafy, smooth, bent at the joints. Leaves flat, acute, nerved, roughish, with [illegible] Stipula sharpish, torn. Panicle rigid, leaning [illegible] main and partial stalks nearly [illegible] or 5-

POA rigida.

Hard Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle lanceolate, two-ranked, dense, smooth, leaning one way; its common stalk bordered. Spikelets of about seven flowers. Florets cylindrical, without ribs.

SYN. Poa rigida. *Linn. Sp. Pl.* 101. *Sm. Fl. Brit.* 99. *Huds.* 42. *With.* 146. *Hull.* 22. *Relh.* 33. *Sibth.* 42. *Abbot.* 18. *Curt. Lond. fasc.* 2. *t.* 4. *Knapp. t.* 48.

Gramen exile duriusculum in muris et aridis proveniens. *Raii Syn.* 410.

NOT unfrequent on walls and in dry gravelly places, where it flowers in June, and soon after becomes entirely dry and bleached. It may be known readily by the extreme rigidity of its stems and panicle, which feel at all times as if made of

Oct. 1 1804 Published by J. & J. Sowerby London

POA compressa.

Creeping Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* ovate; glumes ovate, pointed.

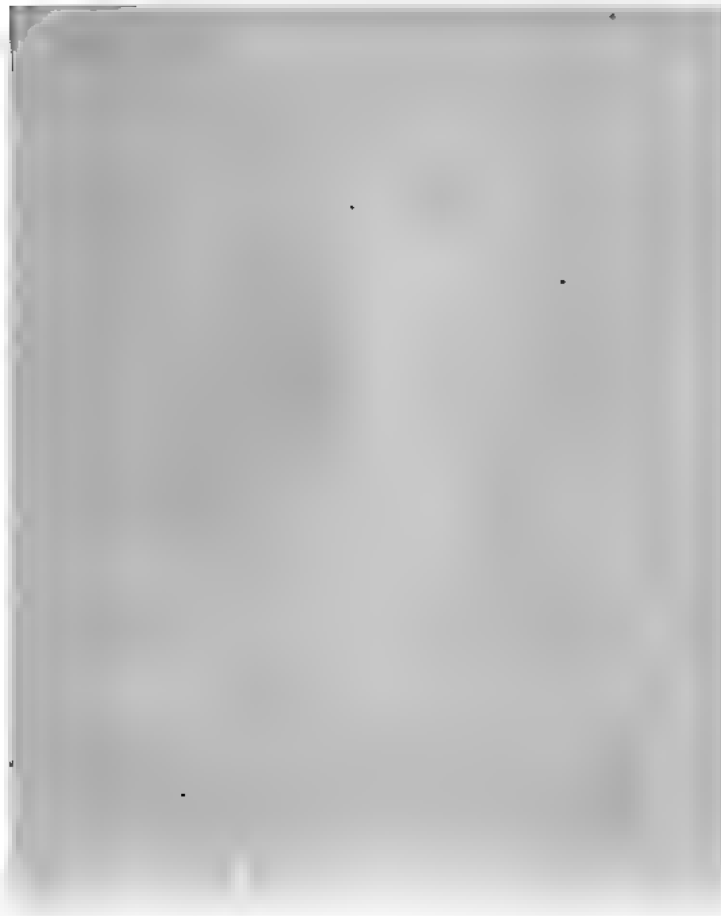
SPEC. CHAR. Panicle condensed; its branches leaning one way, erect before and after flowering. Stem ascending, compressed.

SYN. Poa compressa. *Linn. Sp. Pl.* 101. *Huds. Fl. An.* 41. *With. Bot. Arr.* 89. *Relh. Cant.* 36. *Sibth. Ox.* 42. *Dichs. H. Sicc. fasc.* 6. 1.
Gramen pratense paniculatum medium. *Raii Syn.* 409.

FREQUENT on the tops of walls that are a little covered with earth, and in other very dry places, where it may be found in flower from June to September, and may be easily distinguished by its compressed stem.

The roots are perennial, creeping, consisting of downy fibres, thrown out from the lowest part of the stem, which is decumbent. The straw rises obliquely, the first joints being geniculated, the uppermost very long and erect. Leaves narrow, with a long sheath, and short obtuse stipula, of a glaucous green. Panicle of the same hue, upright, the common stem contracting very suddenly where the first branches come off. All the branches are in the beginning close and erect, acutely angular and rough, a little zigzag: as they flower they spread considerably, but immediately after the discharge of the *pollen* they become again close-pressed to the main branch, so that the upper part of the panicle looks as if it expanded first. By this mark the grass may be known at a distance. The glumes have a silvery edge, and purplish tip; they vary from 3 to 8 or 9 in each calyx.

This grass can scarcely be put to any agricultural use, though all cattle eat it; it does not thrive in moist or manured ground, and there are many better for dry situations.



55.

POA alpina.

Alpine Meadow-grafs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the bafe. *Cor.* of 2 ovate, pointed, beardlefs valves.

SPEC. CHAR. Panicle loofe. Spikelets heartfhaped, of about four flowers. Glumes ovate, rather ficklefhaped, not connected by a web. Lower ftipulæ very fhort.

SYN. Poa alpina. *Linn. Sp. Pl.* 99. *Sm. Fl. Brit.* 100. *Lightf.* 96.

OUR fpecimens of this truly alpine grafs were gathered on mountains to the north of Forfar, by Mr. G. Donn and Mr. J. Mackay. It is perennial, flowering in July or Auguft.

The fibres of the root are long, flender and fmooth. Stems from 4 to 12 inches high, a little decumbent and rooting at their bafe; leafy and fometimes branched below; naked, fmooth and fhining, often purplifh, above. Radical leaves many, fpreading, flat, ribbed; a little glaucous beneath; rough at the margin; bluntifh, yet tipped with a fhort point: ftem-leaves about two, fhort, with very long fmooth fheaths. Lower ftipulæ fhort and blunt; upper lanceolate, often torn or di-

POA flexuosa.

Zigzag Meadow-grass.

TRIANDRIA Digynia.

Gen. Char. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

Spec. Char. Panicle zigzag. Spikelets of three flowers. Glumes ovate, connected by a web. Stipulæ all lanceolate.

Syn. Poa flexuosa. *Sm. Fl. Brit.* 101.

THE Scottish mountain of Ben Nevis, amongst a profusion of botanical rarities, has afforded us this new species of *Poa*, discovered there by the late Mr. John Mackay, a young man who sacrificed his repose, and finally his health and life, to the too ardent pursuit of botany and horticulture. His discriminating powers and readiness of communication will long live in the memory of those who knew him. We would never neglect the opportunity of twining a modest garland for the brows of such benefactors to science, even though it were only of grass or moss.

This *Poa*, we believe, has never been mentioned except in the *Flora Britannica*. It is perennial, growing in small tufts, and flowering in July. The colour of the herbage is a light, rather

Feb 1 1803 Published by Jas Sowerby London

7.

POA bulbosa.

Bulbous Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle slightly zigzag. Spikelets of four flowers. Glumes connected by a web. Leaves finely serrated. Stem bulbous at the base.

SYN. Poa bulbosa. *Lim. Sp. Pl.* 102 α and γ. *Sm. Fl. Brit.* 102. *Hudf.* 41. *With.* 142. *Hull.* 21.

Gramen vernum, radice Ascalonitidis. *Vaill. Par. t.* 17. *f.* 8.

WHEN the *Flora Britannica* was in the press this grass was so little known I found myself obliged to adopt it on the authority of Hudson, describing it from the Linnæan specimen. Fortunately before the publication of that work Mr. Stone favoured me with a native plant of *P. bulbosa* from Yarmouth Denes, and I was enabled to mention it in the preface. Mr. Turner sent the present specimen from thence, and I have observed great plenty of the same at Lowestoft. Mr. W. Borrer has found it at Little Hampton, Sussex.

This grass is peculiarly fitted to inhabit dry sandy ground. Its bulbs grow in clusters, resembling little onions, and dur-


3071

POA cæsia.

Sea-green Meadow-grass.

TRIANDRIA Digynia.

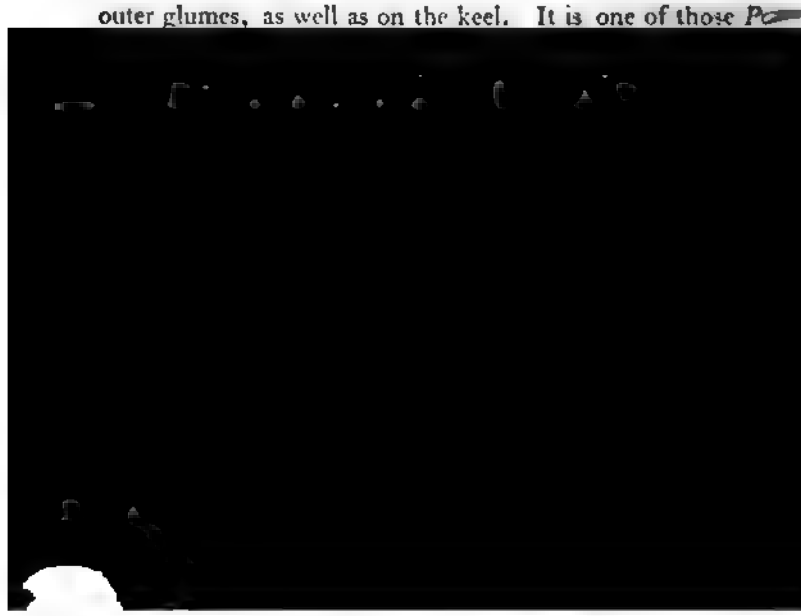
GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle spreading. Spikelets ovate, five-flowered. Glumes lanceolate, silky-edged, unconnected by any web. Stipula very short and blunt.

SYN. Poa cæsia. *Sm. Fl. Brit.* 103.

MY first knowledge of this plant was derived from specimens sent from Scotland to Mr. Fairbairn of Chelsea garden, and I have been obliged to have recourse to that collection for what appears in the annexed plate, having never seen a wild specimen. The late Mr. J. Mackay sent me others from his own garden, the roots of which he had brought from Ben Lawers and other Highland mountains.

This is a perennial grass, flowering in June and July, and remarkable for its glaucous hue. The spikelets are prettily varied with purple, white, green, and a silvery gloss, occasioned by a range of satin-like hairs near the edges of the outer glumes, as well as on the keel. It is one of those *Po*



Harris, Published by Jas Sowerby, London

POA trivialis.

Roughish Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many flore[illegible] 2. *Spikelet* rounded at the base. *Cor.* of 2 ova[illegible], pointed, beardless valves.

SPEC. CHAR. Panicle spreading. Spikelets of th[illegible] flowers. Glumes lanceolate, five-nerved, co[illegible]nected by a web. Stipula elongated.

SYN. Poa trivialis. *Linn. Sp. Pl.* 99. *Sm. Fl. B*[illegible]*t.* 103. *Hudf.* 39. *With.* 143. *Hull.* 22. *Relh.* [illegible] 3. *Sibth.* 41. *Abbot.* 17. *Curt. Lond. fasc.* 2. *t.* [illegible]. Gramen pratense paniculatum medium. *Raii Syn.* 4[illegible] 9.

IF in a general botanical work like this we cannot alw[illegible] charm the eye with splendid objects, the elucidation of curi[illegible] or useful truths will surely not be less acceptable. The t[illegible] grasses figured in this plate and the following are among [illegible] most common, but the most useful; and though they di[illegible] in essential properties, botanists have scarcely, till lately, kno[illegible] how to distinguish them.

P. trivialis grows every where in meadows and pastur[illegible], preferring such as are moist, and flowering from June to Sep[illegible]tember. Its perennial fibrous root forms tufts. The ste[illegible]

POA pratensis.

Smooth-stalked Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle spreading. Spikelets of four flowers. Glumes lanceolate, five-nerved, connected by a web. Stipula short and blunt.

SYN. Poa pratensis. *Linn. Sp. Pl.* 99. *Sm. Fl. Brit.* 104. *Hudf.* 39. *With.* 141. *Hull.* 21. *Relh.* 34. *Sibth.* 41. *Abbot.* 18. *Curt. Lond. fasc.* 2. *t.* 5. *Dickf. H. Sicc. fasc.* 14. 3.

Gramen pratense paniculatum majus, latiore folio. *Raii Syn.* 409.

THIS *Poa* agrees much with the preceding in habit and general appearance, grows no less frequently in almost every situation, and is as valuable to the husbandman. It flowers rather earlier, comes sooner into leaf, and will grow in much drier places than *P. trivialis*; but, according to Mr. Curtis's observations, the latter produces a better crop as the season advances.


1073

POA subcærulea.

Blueish Meadow-grass.

TRIANDRIA Digynia.

Gen. Char. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

Spec. Char. Panicle loose. Spikelets heartshaped, of about three flowers. Glumes ovate, acute, connected by a web. Stipulæ all short and blunt.

Syn. Poa pratensis β, alpina. *Hudf.* 39.
P. glauca. *With.* 148.

GATHERED in Anglesea by the Rev. H. Davies, flowering in June. That this is the *P. alpina* of Hudson, as well as the *glauca* of Withering, we think unquestionable. The original *glauca* of *Fl. Dan.* is notwithstanding widely different, and we have therefore given ours a new name, expressive of its blueish appearance. Hudson found this grass on the mountains of Westmoreland and Cumberland, and his opinion in reducing it to a variety of *P. pratensis* is less strikingly erroneous than if his plant had been (as is commonly supposed) the Linnæan *alpina*, which no good botanist could confound with *pratensis*.

P. subcærulea has a creeping perennial root, with much branched, zigzag, downy fibres, agreeing with those of *pratensis*. Whole plant glaucous, with tints of purple. Stem 6 to 10

POA annua.

Annual Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle divaricated. Spikelets ovate. Florets a little remote, five-ribbed, destitute of a web. Stem oblique, compressed.

SYN. Poa annua. *Linn. Sp. Pl.* 99. *Sm. Fl. Brit.* 105. *Hudf.* 42. *With.* 143. *Hull.* 22. *Relh.* 34. *Sibth.* 42. *Abbot.* 18. *Curt. Lond. fasc.* 1. *t.* 6. *Mart. Rust. t.* 98. *Stillingfl. t.* 7.

Gramen pratense minus, seu vulgatissimum. *Raii Syn.* 408.

EVERY where in meadows and pastures, and flowering almost throughout the year when the weather is mild. The root is strictly annual, though the stems throw out fibres from their lower parts, and seem to creep. Herbage bright green, not glaucous. Stems several, obliquely spreading, compressed, leafy, smooth. Leaves linear, flaccid, bluntish, smooth, with a little roughness at the edges, flat, except a waved or crumpled appearance here and there, very characteristic of the species, though not absolutely peculiar to it. Sheaths long, compressed, smooth, crowned by a sharp stipula. Panicle

POA glauca.

Slender Glaucous Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle glaucous, slender, erect. Spikelets ovate, of about three flowers. Glumes bluntish, silky-edged, unconnected by any web. Stipula very short.

SYN. Poa glauca. *Fl. Dan. t.* 964. *With.* 148. *Sm. Fl. Brit.* 1388. *Hull.* 23.

P. cæsia. *Knapp. t.* 56.

P. n. 1468. *Hall. Hist. v.* 2. 224. *Lachenal.*

Gramen paniculatum angustifolium montanum, paniculâ densâ, locustis parvis muticis. *Scheuchz. Agr.* 180.

THE *Poa glauca* of Withering has been communicated to me by Mr. Griffith, the original authority for it in Britain, who found it on Snowdon, and I have no doubt of the correctness


1720

POA nemoralis.

Wood Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle and leaves slender. Spikelets lanceolate, of about three flowers. Glumes acute, obsoletely five-ribbed. Stipula very short, notched.

SYN. Poa nemoralis. *Linn. Sp. Pl.* 102. *Sm. Fl. Brit.* 106. *With.* 146. *Hull.* 22. *Relh.* 34. *Sibth.* 43. *Abbot.* 19.

P. angustifolia β. *Huds.* 41.

β. P. angustifolia α. *Huds.* 40.

P. pratensis, var. 2. *With.* 142. *Hull.* 21.

IN the north of England scarcely any wood or grove can be found in which this grass does not compose the tall thin herbage under the trees, in which situations it thrives well. In the south it is less frequent, but abounds in Charlton wood, and

5.

POA decumbens.

Decumbent Meadow-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* rounded at the base. *Cor.* of 2 ovate, pointed, beardless valves.

SPEC. CHAR. Panicle generally simple, condensed, erect. Spikelets ovate, four-flowered, the length of the calyx. Stipulæ formed of little hairs.

SYN. Poa decumbens. *With.* 147. *Sm. Fl. Brit.* 107. *Hull.* 23.

Festuca decumbens. *Linn. Sp. Pl.* 110. *Hudf.* 47. *Relh.* 43. *Sibth.* 46. *Abbot.* 22. *Dickf. H. Sicc. fasc.* 11. 3.

Gramen avenaceum parvum procumbens, paniculis non aristatis. *Rai Syn.* 408.

SPONGY bogs on barren sandy or mountainous ground produce this grass frequently. It flowers in July and is perennial.

The whole plant is remarkably harsh and rigid, lying close to the ground, except when in flower. The roots creep, though to no great extent. The stem is about a foot long, jointed and bent, smooth, leafy. Leaves linear, straight, horizontal, rather glaucous. Their long sheaths closely invest the stem and are hairy (particularly upwards) and striated. The stipula which


792

BRIZA minor.

Small Quaking-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing many florets. *Spikelet* 2-ranked. *Cor.* of 2 heart-shaped, obtuse valves. *Seed* depressed, attached to the corolla.

SPEC. CHAR. Spikelets triangular, of seven florets, which are shorter than the calyx. Stipula lanceolate, very long.

SYN. Briza minor. *Linn. Sp. Pl.* 102. *Sm. Fl. Brit.* 108. *Huds.* 38. *With.* 148. *Hull.* 23. *Dichs. H. Sicc. fasc.* 5. 3.

Gramen tremulum minus, paniculâ amplâ, locustis parvis triangulis. *Raii Syn.* 412.

OUR wild specimen represented in the plate was sent from Pensance by favour of Mr. Penneck.

This is one of our rarest grasses, found only in fields near the south-west extremity of Britain and in Guernsey. In the south of Europe it occurs frequently, and is annual, flowering in July.

Root of several small downy fibres. Stem one or more, 10 or 12 inches high, leafy, round and smooth. Whole plant of a light green. Leaves lanceolate, erect, rough-edged, with very long, somewhat inflated, sheaths. Stipula membranous and thin, remarkably long, acute, decurrent. Panicle elegantly

June 1, 1806 Published by Jos. Sowerby, London.

BRIZA media.

Common Quaking-Grass, or Cow-Quakes.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, with many flowers; the little spike two-ranked, its valves heart-shaped, obtuse, the innermost smaller.

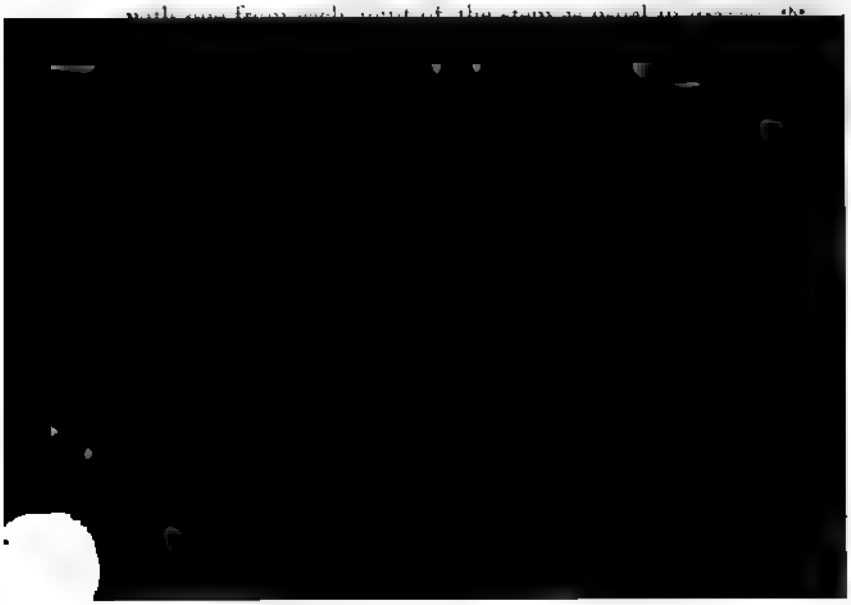
SPEC. CHAR. Little spikes ovate. Calyx shorter than the florets, which are about seven in number.

SYN. Briza media. *Linn. Sp. Pl.* 103. *Huds. Fl. An.* 38. *With. Bot. Arr.* 92. *Relh. Cant.* 38. *Sibth. Ox.* 43. *Mart. Fl. Rust. t.* 39. *Dicks. H. Sicc. fasc.* 5. 2.

Gramen tremulum. *Raii Syn.* 412.

VERY common in pastures, where, as Professor Martyn observes, it is made into hay with other grasses, but never cultivated alone for any particular purpose. The roots are perennial, and the flowers appear in May.

Root fibrous. Straw upright, from 6 to 18 inches, most commonly about a foot, in height, round, very smooth, with one or two joints near the bottom. Leaves mostly at the root,



DACTYLIS stricta.

Smooth Cock's-foot Grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, compressed; one valve larger and carinated.

SPEC. CHAR. Spikes 2 or 3, erect, smooth; flowers leaning one way, downy.

SYN. Dactylis stricta. *Solander in Ait. Hort. Kew. v.* 1. 104.

D. cynosuroides. *Hudf. Fl. An.* 43. *With. Bot. Arr.* 93.

Spartum essexianum, spica gemina clausa. *Raii Syn.* 393.

FOUND, though rarely, in muddy salt-marshes and about the mouths of rivers on the east side of this kingdom. Our specimens were gathered by T. Woodward and D. E. Day, Esqrs. between Aldborough and the river's mouth, in August last.

Root perennial, very strong. The whole herb is exceedingly hard and rigid, from 10 to 20 inches high, erect; the straws clothed to the top with alternate, sheathing, striated, pointed leaves, of a dull green, with short jagged stipulæ. Spikes terminal, generally 2, perfectly erect, close pressed together and

9.

DACTYLIS glomerata.

Rough Cock's-foot Grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, compressed; one valve larger, and carinated.

SPEC. CHAR. Panicle crowded, leaning one way.

SYN. Dactylis glomerata. *Linn. Sp. Pl.* 105. *Huds. Fl. An.* 43. *With. Bot. Arr.* 94. *Relh. Cant.* 39. *Sibth. Ox.* 43.

Gramen asperum. *Raii Syn.* 400.

ONE of the most common of all grasses, in pastures, hedges, thickets, &c. remarkable for thriving under the shade and drippings of trees, and thence sometimes (as Dr. Withering mentions) called Orchard Grass. It is a harsh coarse grass,

CYNOSURUS cristatus.

Crested Dog's-tail Grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 husks, containing few florets. *Partial Receptacle* unilateral, leafy.

SPEC. CHAR. Bracteæ pinnatifid.

SYN. Cynosurus cristatus. *Linn. Sp. Pl.* 105. *Huds. Fl. An.* 59. *With. Bot. Arr.* 95. *Relh. Cant.* 39. *Sibth. Ox.* 52. *Leers Herb.* 49. *t.* 7. *f.* 4.

Gramen cristatum. *Raii Syn.* 398.

THIS grass is equally common with the preceding, making a principal part of the turf on high gravelly or chalky soils, in parks, lawns and sheep-walks, and affords good nourishment to those animals as well as to deer.

The root is tufted, perennial, with long simple fibres. Stems very erect, from a foot to 18 inches high, rigid, round, smooth,

CYNOSURUS echinatus.

Rough Dog's-tail-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing several florets. *Partial Receptacle* unilateral, leafy.

SPEC. CHAR. Bracteæ pinnate, chaffy, bearded. Spike compound, ovate.

SYN. Cynosurus echinatus. *Linn. Sp. Pl.* 105. *Sm. Fl. Brit.* 112. *Huds. 59. With. 150. Hull. 29.*

Gramen alopecuroides, spicâ asperâ brevi. *Raii Syn.* 397.

THIS grass loves a sandy soil and rather a warm climate. It has not been found in any other part of our island than here and there on the south coast. Sherard found it in Jersey. We have drawn a cultivated specimen, but not more luxuriant than wild ones with which it has been compared. The seeds were gathered in Sussex. It flowers in July, and is annual.

Root of a few downy fibres. Stems one or more, ascending, leafy, round, striated, smooth, about a span high. Leaves


1335

FESTUCA ovina,
Sheep's Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, with sharp-pointed glumes.

SPEC. CHAR. Panicle pointing one way, close. Florets roundish, smooth at their base. Straw square. Leaves bristle-shaped, rough.

SYN. Festuca ovina. *Linn. Sp. Pl.* 108. *Hudf.* 44. *With.* 152. *Relh.* 40. *Sibth.* 43. *Mart. Fl. Rust. t.* 102.

β. F. rubra. *With.* 153, not of Linn.

γ. F. tenuifolia. *Sibth.* 44. *With.* 155.

Gramen capillaceum, locustellis pennatis, non aristatis. *Raii Syn.* 410.

A COMMON grass in dry exposed pastures, flowering in June, and supposed by Linnæus, Stillingfleet and others to be a peculiarly excellent food for sheep. Those who have recommended it for a crop of hay have probably mistaken for it the F. *duriuscula*, *t.* 470, which thrives much more by culture, and yields a far greater produce. The square stem of F. *ovina* distinguishes them at once without any other mark; the microscopic botanist may recur to the perfectly smooth-edged inner valve of the corolla, which in F. *duriuscula* is finely fringed.

Root perennial, composed of black smooth fibres. Straws

FESTUCA vivipara.

Viviparous Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Panicle pointing one way, crowded. Florets compressed, keeled, beardless, rather downy as well as the calyx. Stem square. Leaves bristle-shaped, smooth.

SYN. Festuca vivipara. *Sm. Fl. Brit.* 114.

F. ovina β. *Linn. Sp. Pl.* 108. *Huds.* 44. *Lightf.* 101. *With.* 152, *var.* 4.

Gramen sparteum montanum, spicâ foliaceâ graminea, majus et minus. *Raii Syn.* 410. *t.* 22. *f.* 1.

IT has been usual to consider this as a variety of *Festuca ovina*, see *v.* 9. *t.* 585, but a very slight comparison of their flowers will surely justify their being kept distinct. The plant before us is found only about the cloud-capt summits of the loftiest mountains. We have dried specimens from Scotland, Wales, and Westmoreland, and the recent garden one drawn

[1917]

FESTUCA cæsia.

Sea-green Heath Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Panicle pointing one way, close, glaucous. Florets cylindrical, roughish, awned; inner glume rough-edged. Straw quadrangular. Leaves compressed, channelled, glaucous.

IN almost the last botanical excursion that I enjoyed with my late friend Mr. Crowe, when we examined the country round Bury, in June 1804, along with our experienced guide Sir Thomas Cullum, we were much struck with the very glaucous aspect of this grass on the dry barren heaths north of that town. We preserved both dry and living specimens; and though the latter have been cultivated ever since in the rich moist ground at Lakenham, and have consequently grown very luxuriantly, their glaucous hue, and all the essential characters above stated, by which they may be known from *F. ovina*, *t.* 585, and *duriuscula*, *t.* 470, remain unchanged. Mr. Dickson informed Mr. Crowe that he had long known this plant on dry ground about Croydon, but could not find any description of it. He thought it near *F. pumila* of Host. Mr. Curtis used to call it *glauca*, but that name is now given by Mr. Winch to another species.

Our plant forms broad perennial depressed tufts, so very conspicuous for their blue-green hue, especially when moist with dew, that they cannot be overlooked. Stems about a span high, naked above, with 4 angles, but the spaces between them are convex. Leaves narrow, compressed, keeled, smooth, marked with a shallow channel above. Stipula minute. Panicle ovate, very glaucous, tinged with purple. Florets 4 or 5 in each calyx, roughish, with short rough awns; their inner glumes downy at the edge.——It flowers in the middle of June.


1917

FESTUCA duriuſcula.

Hard Feſcue-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, ſomewhat cylindrical, with ſharp-pointed glumes.

SPEC. CHAR. Panicle pointing one way, oblong, branched. Florets about ſix, nearly cylindrical, awned. Stem-leaves flat. Root fibrous.

SYN. Feſtuca duriuſcula. *Linn. Sp. Pl.* 108. *Hudſ.* 44. *With.* 153. *Relh.* 40. *Sibth.* 44.
Gramen pratenſe, panicula duriore laxa, unam partem ſpectante. *Rai Syn.* 413. *t.* 19. *f.* 1.
β. Feſtuca dumetorum. *Linn. Sp. Pl.* 109. *With.* 154.

A COMMON graſs every where in paſtures, meadows, and waſte ground, flowering about midſummer.

Root fibrous, perennial. Herbage of a full darkiſh green. Straws a foot or more in height, erect, leafy. Leaves upright, roughiſh: the lower ones ſlender, rigid, acute, compreſſed, ſtriated, their baſe completely ſheathing the ſtraw, with ſcarcely any perceptible ſtipula. Upper leaves broader and flat. Panicle erect, a little zigzag, alternately branched, the branches all leaning one way, the lower ones ſubdivided and moſt ſpreading. Flower-ſtalks all ſharply angular, and rough. Spikelets at firſt cylindrical, but by the florets ſpreading they become flattened, often reddiſh. Calyx of two unequal, lan-

FESTUCA rubra.

Creeping Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Panicle pointing one way. Florets roundish, awned. Leaves downy on the upper side. Root creeping.

SYN. Festuca rubra. *Linn. Sp. Pl.* 109. *Sm. Fl. Brit.* 116. *Huds.* 45. *Lightf.* 102. *Hull. ed.* 2. 29. *Stilling fl. Misc. t.* 9.

F. repens, a variety of duriuscula. *Knapp. t.* 119.

Gramen alpinum pratense, paniculâ duriore laxâ spadiceâ, locustis majoribus. *Scheuchz. Agr.* 287. *t.* 6. *f.* 9.

β. Festuca cambrica. *Huds.* 45. *With.* 155. *Hull.* 24.

γ. F. glabra. *Lightf.* 1085. *Huds.* 648. *With.* 154. *Hull.* 24.

δ. F. glauca. *Winch Guide, v.* 2. *præf.* 2.

IT is very hard to say in this genus what may or may not be a species, but we feel much inclined to agree with our observing friend Mr. Knapp, that the 4 supposed species, which we here reduce to one, are not really distinct even from *F. duriuscula, t.* 470. From our figure of the latter its tendency to a creeping root is obvious. In the plant before us, which inhabits the loose barren sands of the sea coast, that part is indeed prodigiously elongated, and acquires long woolly fibres, a change apparently caused by its situation. In alpine specimens the same part spreads less, producing more frequent herbage. The whole plant is strongest and most rigid on the coast, as happens in *Triticum repens*, and occasionally more glaucous likewise. The upper side of the leaves is very downy, and their edges involute. Panicle various in size, as are the awns in length. Florets more or less downy. It flowers in June.

Engraved published by J. Sowerby London

FESTUCA bromoides.

Barren Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Panicle upright, pointing one way. Flores awl-shaped, awned, rough at the top. Leaves bristle-shaped, shorter than their sheaths.

SYN. Festuca bromoides. *Linn. Sp. Pl.* 110. *Sm. Fl. Brit.* 117. *Huds.* 46. *With.* 151. *Hull.* 25. *Sibth.* 44. *Ehrh. Calam.* 6. *Knapp. t.* 69.

Gramen paniculatum bromoides minus, paniculis aristatis, unam partem spectantibus. *Raii Syn.* 415. *Phil. Phyt. t.* 33. *f.* 10.

FOUND on dry sandy ground, sometimes on walls, but not common, flowering in June and July. The Rev. Mr. Hemsted sent it from Bedford.

Root annual, of numerous branching fibres. Stems several, forming tufts, about a span high or more, (for the plant varies much in size,) erect, round, very smooth, slender, leafy chiefly in their lower part, and furnished with 3 or 4 brown joints,


1411

FESTUCA Myurus.

Wall Fescue-grass.

TRIANDRIA Digynia.

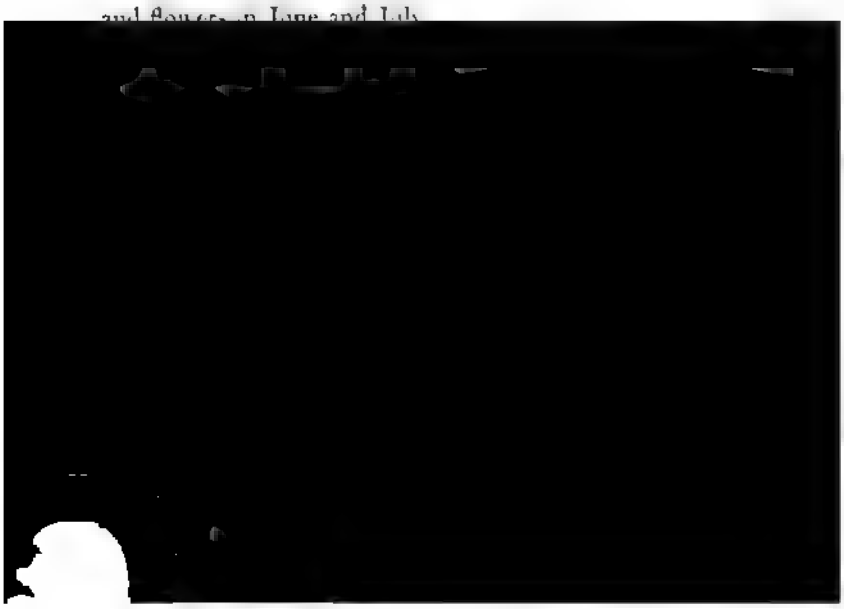
GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Panicle drooping, pointing one way. Florets awl-shaped, awned, rough at the top. Leaves bristle-shaped, somewhat keeled, very short.

SYN. Festuca Myurus. *Linn. Sp. Pl.* 109. *Sm. Fl. Brit.* 118. *Huds.* 46. *With.* 151. *Hull.* 29. *Relh.* 37. *Sibth.* 44. *Abbot.* 21. *Dicks. H. Sicc. fasc.* 10. 2. *Knapp. t.* 70.

Gramen murorum, spicâ longissimâ. *Raii Syn.* 415.

THIS is much more frequent than the last in dry barren ground, and especially on the tops of walls, where its long inclining silky panicles, waving with every breath of wind, and growing in large tufts, easily excite attention. It is annual, and flowers in June and July.



Published by Ed. Donovan, London

FESTUCA uniglumis.

Single-husked Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Panicle upright, pointing one way, nearly simple. Florets awl-shaped, compressed, awned. One valve of the calyx very short.

SYN. Festuca uniglumis. *Soland. in Ait. H. Kew.* v. 1. 108. *Sm. Fl. Brit.* 118. *Dicks. H. Sicc. fasc.* 17. 1. *Knapp. t.* 71.

Stipa membranacea. *Linn. Sp. Pl.* 116? *Mant.* 2. 326?

Lolium bromoides. *Huds.* 55. *With.* 169. *Hull.* 27.

Festuca avenacea sterilis humillima, spicâ unam partem spectante. *Dill. in Raii Syn.* 413. *n.* 3. *t.* 17. *f.* 2, but not *Raii Syn. ed.* 2. 261. 4.

FOUND on the sandy sea shore of Sussex, from whence we have several times received specimens. It flowers in June,


243.

FESTUCA triflora.

Three-flowered Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Panicle spreading. Spikelets three-flowered, with long awns.

SYN. Bromus triflorus. *Linn. Sp. Pl.* 115. *Fl. Dan. t.* 440. *Sm. Tr. of Linn. Soc. v.* 8. 276.

Gramen bromoides, paniculâ sparsâ, locustis minoribus aristatis. *Scheuchz. Agr.* 511. *t.* 5. *f.* 19.

THIS grass, new to Britain, and very little known to botanists in general, was found by Mr. Crowe on his estate at Saham, Norfolk, in the autumn of 1804, when it was in flower, as recorded in the 8th volume of the Linnæan Society's Transactions. His original specimen is drawn in our plate, but he could never again find the precise spot where it grew, nor have I since his death had either opportunity or inclination to visit that sequestered country, where we have together collected several uncommon plants as well as insects.

Less accurate observers than Mr. Crowe may probably have overlooked this plant for *Festuca gigantea*, *t.* 1820; but besides its smaller size and many shades of difference in its stipula and habit, it is essentially distinguished by having but 3, or at most 4, florets in each calyx, and a more spreading, less drooping, panicle. The florets are slightly 5-ribbed in their upper part. Awns long, rough, alike terminal in all the florets, as far as we can discern, there being only now and then a slight separation of the marginal membrane. Inner glumes minutely rough with depressed short hairs, not coarsely fringed. Root tufted, perennial, with many strong rough fibres.


1978

[1820]

FESTUCA gigantea.

Tall Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Panicle drooping toward one side, branched and spreading. Florets lanceolate, swelling, awned. Leaves lanceolate, ribbed.

SYN. Festuca gigantea. *Villars Dauph. v.* 2. 110. *Sm. Fl. Brit.* 120. *Relh.* 37.

Bromus giganteus. *Linn. Sp. Pl.* 114. *Huds.* 51. *With.* 162. *Sibth.* 48. *Abbot.* 24. *Curt. Lond. fasc.* 5. *t.* 7. *Knapp. t.* 87. *Ehrh. Phytoph.* 52.

Gramen avenaceum glabrum, paniculâ e spicis raris strigosis compositâ, aristis tenuissimis. *Raii Syn.* 415.

THIS grass often occurs in groves and shady places that are rather moist. It flowers in July and August.

Root perennial, fibrous, blackish. Stem 3 or 4 feet high, upright, simple, leafy, round, striated, smooth to the touch. Leaves upright, of a full green, broadish, rather lanceolate than linear, pointed, ribbed, shining beneath, rough on the

Dec. 1st, Published by Jas. Sowerby, London.

FESTUCA calamaria.

Reed-like Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp pointed glumes.

SPEC. CHAR. Panicle pointing one way, erect, much branched. Florets oblong, angular, beardless. Leaves sword-shaped, striated.

SYN. Festuca calamaria. *Sm. Fl. Brit.* 121.

Poa trinervata. *Schrad. Spicil.* 3. *Wilden. Sp. Pl.* v. 1. 389.

A NATIVE of moist rather alpine woods. Our specimens were communicated by Mr. G. Donn of Forfar, who informs us that he has known this grass for 12 years past, having found it in Dumbartonshire and Breadalbane, also near Fort Augustus. We first received it from Mr. Mackay, see *Fl. Brit.* It is not, however, peculiar to Scotland. The Rev. Mr. Butt has found it in a wood near Newtown Barry, Ireland; and Mr. Moseley of Glashampton favoured us lately with living plants from the ledges of a lofty red sand-stone rock in Shrawley wood, near his residence. Of so new and rare a plant we would not omit to mention all its known stations.

3.

FESTUCA decidua.

Deciduous Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Panicle pointing one way, erect, much branched. Florets two or three, oblong, angular, beardless; the upper ones deciduous. Leaves linear, striated.

SYN. Festuca decidua. *Bellardi Mss.*

GATHERED last summer in Gurness Gill, on the south side of Howes-water, Westmoreland, by the Rev. Mr. Holme, F.L.S. We find his specimens agree in every point with one sent from Piedmont in 1789, under the above name, by our worthy friend Dr. Bellardi, with an inquiry "whether it might be *F. sylvatica* of Villars?" It certainly comes very near that species, which is our *F. calamaria, t.* 1005; a name we preferred, as not clashing with *F. sylvatica* of Hudson, our *Bromus sylvaticus, t.* 729; but which we shall willingly resign to Schrader's decision in favour of the former.


2260.

FESTUCA loliacea.
Spiked Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Spike two-ranked, drooping. Spikelets nearly sessile, linear-oblong. Florets cylindrical, without awns or dorsal ribs.

SYN. Festuca loliacea. *Huds. ed.* 1. 38. *Sm. Fl. Brit.* 122. *With.* 157. *Hull.* 24. *Relh.* 38. *Sibth.* 45. *Curt. Lond. fasc.* 6. *t.* 9. *Knapp t.* 74.
F. fluitans β. *Huds.* 47.
F. elongata. *Ehrh. Calam.* 93.
Graminis loliacei vulgaris varietas spicis rariùs dispositis. *Moris. sect.* 8. *t.* 2. *f.* 2.

NOT unfrequent in rich, rather moist, pastures and meadows, flowering in July, though its great resemblance to *Lolium perenne*, *t.* 315, occasions it to be generally overlooked.

Root perennial, fibrous. Stems erect, 2 feet high, simple, slender, leafy, round, smooth. Leaves linear, narrow, flat, ribbed, smooth, with long sheaths and very short stipulas. Spike long and lax, a little drooping, the spikelets upright, mostly sessile, in 2 ranks, alternate, linear-oblong, acute,


1821

FESTUCA pratensis.

Meadow Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Panicle nearly upright, loose, pointing to one side. Spikelets linear, compressed, bluntish. Florets cylindrical, obscurely ribbed.

SYN. Festuca pratensis. *Huds. ed.* 1. 37. *Sm. Fl. Brit.* 123. *Relh.* 38. *Abbot.* 21. *Curt. Lond. fasc.* 6. *t.* 7. *Mart. Rust. t.* 84. *Knapp, t.* 73.

F. elatior. *Linn. Fl. Suec.* 32. *With.* 156, *var.* 2. *Hull.* 24.

F. fluitans γ. *Huds.* 47.

Gramen paniculatum elatius, spicis longis muticis squamosis. *Raii Syn.* 411; but not *Barrel. Ic. t.* 25.

NOT uncommon in meadows and pastures, especially such as are rather moist, where it flowers about the middle or end of June.

Root fibrous, perennial. Stems about 2 feet high, erect, smooth, simple, leafy. Leaves spreading, linear, pointed, flat, of a darkish green, striated, the upper ones rough on both sides to the touch. Sheaths striated, very smooth. Stipula short and obtuse, decurrent, embracing the stem. Panicle nearly erect, its branches spreading chiefly to one side, growing in pairs, unequal in size; the stalks compressed and rough. Spikelets stalked, divaricated, alternate, linear-oblong, bluntish, compressed, smooth, tinged with purple or brown. Calyx-glumes unequal, sharpish, smooth. Florets numerous, a little distant, two-ranked, cylindrical, acute, marked in the upper part with 5 inconspicuous ribs; their margin membranous. Inner valves downy at the edge.

Mr. Curtis, whose whole account of this grass is excellent, recommends it as very hardy, and affording a plentiful crop of good herbage.

FESTUCA elatior.

Tall Fescue-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, two-ranked, with sharp-pointed glumes.

SPEC. CHAR. Panicle drooping, spreading loosely every way, very much branched. Spikelets ovato-lanceolate, acute. Florets cylindrical, obscurely ribbed.

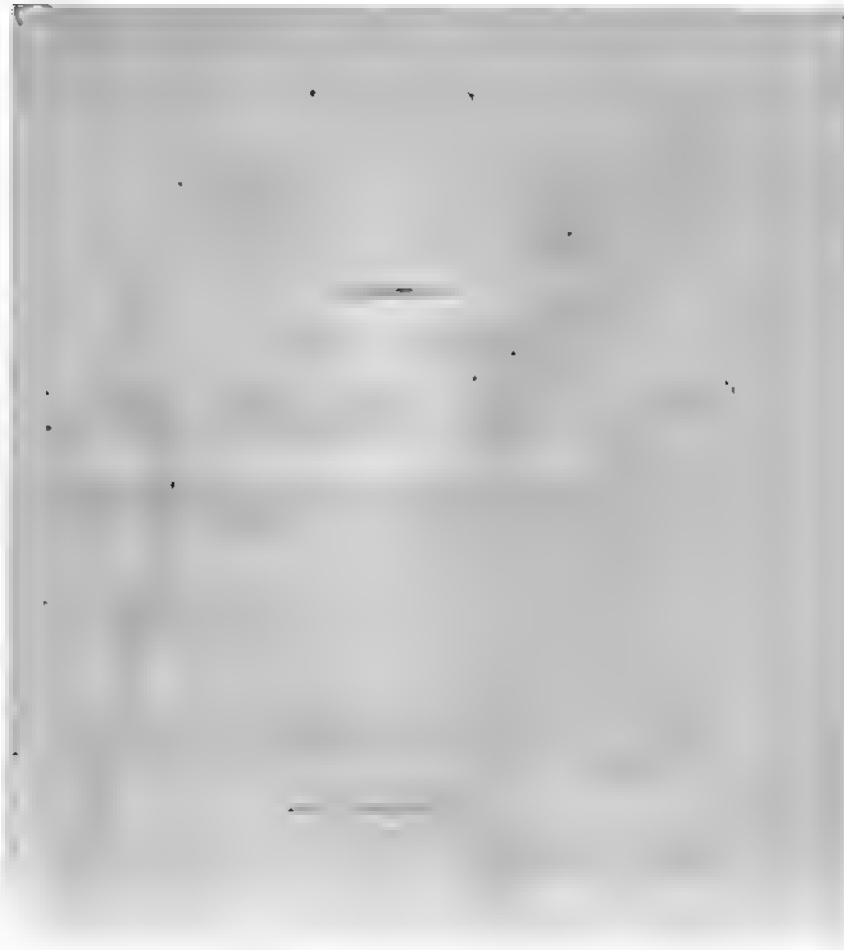
SYN. Festuca elatior. *Linn. Sp. Pl.* 111. *Sm. Fl. Brit.* 124. *Huds.* 47. *With.* 155. *Hull.* 24. *Relh.* 38. *Sibth.* 45. *Abbot.* 21. *Curt. Lond. fasc.* 6. *t.* 8.

G. arundinaceum aquaticum, paniculâ avenaceâ. *Raii Syn.* 411.

G. paniculatum nemorosum, latiore folio, glabrum, paniculâ nutante non aristatâ. *Dill. in Raii Syn.* 411, but the plant of Micheli is F. calamaria, *t.* 1005.

FOUND in the moist meadows and osier-grounds about the Thames, and in other similar places. Sherard had it from Dover in a very luxuriant state, and from his specimens, which we have compared with those of Linnæus, Dillenius admitted it into his edition of Ray, though (unless I am greatly mistaken) it is not different from the species in that work immediately preceding.

It is perennial, flowering in July. The root is fibrous, forming very large tufts producing abundance of coarse herbage. The stems vary from 3 to almost 5 feet in height. Leaves twice the size of *F. pratensis;* from which it further differs in having a much more branched and drooping panicle, which spreads nearly in every direction, with ovate, acute, less compressed spikelets.



BROMUS secalinus.

Smooth Rye Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle spreading; stalks but little branched. Spikelets ovate, compressed, of about ten distinct, somewhat cylindrical, florets.

SYN. Bromus secalinus. *Linn. Sp. Pl.* 112. *Sm. Fl. Brit.* 125. *Tr. of Linn. Soc. v.* 4. 281. *Hull.* 24. *Relh.* 39. *Abbot.* 22.

B. polymorphus γ. *Huds.* 49. *With.* 159. *var.* 2.

Festuca avenacea, spicis habitioribus, glumis glabris. *Raii Syn.* 414.

SINCE the species of this difficult genus have become better known to botanists, the *B. secalinus* has been observed in corn-fields in various parts of Britain. In Norfolk it often occurs. Our specimens were sent from Copgrove near Knaresborough by the Rev. Mr. Dalton, in the middle of September 1802.

The root is annual. Stem about 3 feet high, simple, round, smooth and leafy. Leaves broadish, flat, ribbed; rough at

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BROMUS multiflorus.

Downy Rye Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle spreading; stalks but little branched. Spikelets ovato-lanceolate, compressed, of about fifteen, rather imbricated, and somewhat cylindrical, florets.

SYN. Bromus multiflorus. *Weigel. Obs.* 2. *t.* 1. *f.* 1. *Sm. Fl. Brit.* 126. *Tr. of Linn. Soc. v.* 4. 283. *Hull.* 25. *Relh.* 39. *Knapp. t.* 80.

B. secalinus. *Leers.* 36. *t.* 11. *f.* 2. *Lightf.* 1086. *Linn. Fl. Suec. ed.* 2. 83 β.

Festuca graminea, glumis hirsutis. *Bauh. Theatr.* 143. *Scheuchz. Agr.* 250. *t.* 5. *f.* 9.

WEIGEL's figure and description in his rare dissertation leave no doubt of this being his *B. multiflorus*, and he is the first botanist who understood it, though there is little or no doubt of any of the above synonyms. Lightfoot's indeed depends chiefly upon the place of growth, for his account is a compilation. I wish some good botanist would search the fields between Edinburgh and New Haven, where I gathered the specimen here delineated, in July 1782. It is the only British one of which we are quite certain.

This species differs from *B. secalinus*, *t.* 1171, to which it is nearest allied, in having more lanceolate spikelets, consisting of from 12 to 16 florets, with downy glumes. We should however by no means depend on such a difference of number, but there is an essential distinction in their shape. These florets are much less cylindrical, and never so remote as in the *secalinus*, in which respect they more approach *mollis*, *t.* 1078, but those are only concave, and never cylindrical at all. To understand this genus truly, the spikelets must be observed in their several stages of growth, and then I believe the species cannot be confounded.


1884

BROMUS mollis.

Soft Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle erect, close, compound. Spikelets ovate. Florets imbricated, depressed, ribbed, downy.

SYN. Bromus mollis. *Linn. Sp. Pl.* 112. *Sm. Fl. Brit.* 126. *Tr. of Linn. Soc. v.* 4. 284. *Hull.* 25. *Curt. Lond. fasc.* 1. *t.* 8. *Mart. Fl. Rust. t.* 99. *Relb.* 45. *ed.* 2. 39. *Sibth.* 47. *Abbot.* 23.
B. polymorphus α. *Hudf.* 48. var. 1. *With.* 159.
Festuca avenacea hirsuta, paniculis minùs sparsis. *Raii Syn.* 413.

VERY common and abundant in pastures, also on waste ground, walls, &c. flowering early in June, when it makes a considerable part of the general crops of hay.

Root annual, of a few simple fibres. Stem erect, about 2 feet high, simple, generally smooth, sometimes hairy; the joints swelling, and often thickly clothed with hairs. Leaves and their sheaths thickly covered with soft hoary pubescence. Stipulæ bluntly pointed. Panicle 2 or 3 inches long, erect, close, a little spreading when in full flower; its branches half-

Oct. 1. 1808 Published by Jas. Sowerby London

BROMUS racemosus.

Smooth Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong; 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle nearly erect, spreading, simple. Spikelets ovate, of about six imbricated, depressed, ribbed, smooth florets.

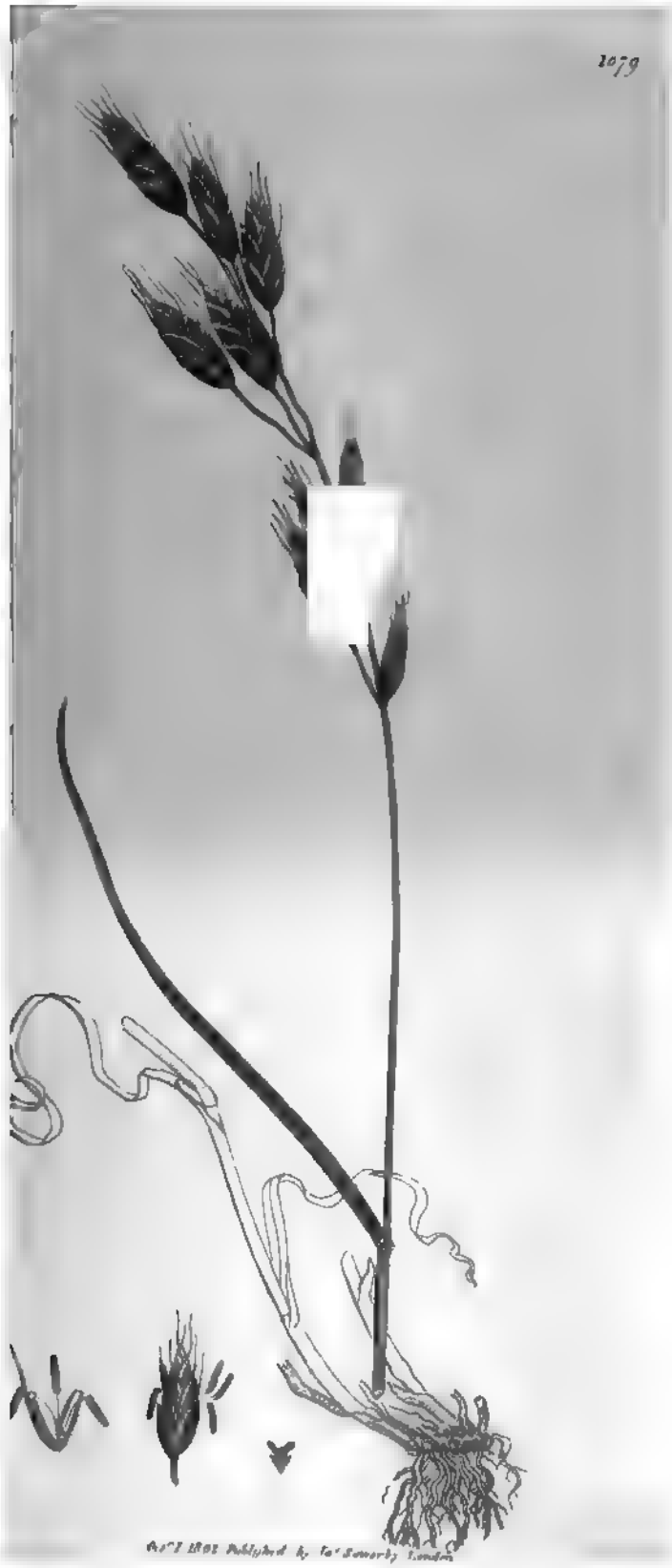
SYN. Bromus racemosus. *Linn. Sp. Pl.* 114. *Sm. Fl. Brit.* 128. *Tr. of Linn. Soc. v.* 4. 286. *Hull.* 25.

B. polymorphus β, δ. *Hudf.* 49. var. 3, 4. *With.* 160.

Festuca avenacea, spicis strigosioribus, e glumis glabris compactis. *Raii Syn.* 414.

Gramen avenaceum pratense, glumâ tenuiore glabrâ. *Dill. in Raii Syn.* 414.

THERE is reason to presume that this species of *Bromus*, though long overlooked by the generality of botanists, is not extremely rare. Since its characters have been more amply explained than heretofore, we have received it from [illegible]


1079
Octr 1802 Published by Jas Sowerby London

BROMUS squarrosus.

Corn Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle drooping; stalks simple. Spikelets ovate, of about twelve imbricated depressed florets, with divaricated awns.

SYN. Bromus squarrosus. *Linn. Sp. Pl.* 112. *Sm. Fl. Brit.* 129. *Tr. of Linn. Soc. v.* 4. 288. *Huds.* 49? *With.* 160? *Hull.* 25?

Festuca graminea, glumis vacuis. *Scheuchz. Agr.* 251. *t.* 5. *f.* 11.

Gramen phalaroides majus acerosum, nutante spicâ. *Barrel. Ic. t.* 24. *f.* 1.

MR. HUDSON mentions this grass as growing in fields near Glastonbury, Somersetshire, and Marshfield, Sussex, but no other person has been able to find it. Mr. Knapp, the great investigator of British grasses, has never met with it, and I have hinted my doubts on the subject in the *Fl. Brit.*, since which I have received *B. secalinus* from Sussex as *squarrosus*, from a friend of Mr. Hudson's, though not indeed with his authority. Wishing this work to contain all the British plants, as enumerated in the *Flora Britannica*, we think it right to introduce a figure of every such plant, not *proved* to be a mistake, from foreign specimens when no other are to be had. Very few indeed are in such a predicament, and our figures will lead practical observers to decide each point in dispute, for the profit of those who come after us. Having so nearly reached the termination of our labours, we would leave nothing undone.

This is a small annual species, remarkable for its large ovate spikelets, with turgid (but not cylindrical) many-ribbed [illegible] whose inner glumes are comparatively very small, [illegible]th remote teeth. The awns are singularly divar[illegible] hairs on the sheaths of the leaves point down-

May 1st 1811. Published by Sa.t Sowerby London.

BROMUS arvensis.
Taper Field Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle spreading, drooping, compound. Spikelets lanceolate, acute, about eight-flowered. Florets elliptical, imbricated, smoothish, with two close ribs on each side.

SYN. Bromus arvensis. *Linn. Sp. Pl.* 113. *Fl. Suec.* n. 97. *Sm. Tr. of L. Soc.* v. 4. 289. *Fl. Brit.* 130. *Rel. Rudb.* 15. *Leers t.* 11. *f.* 3. *Ehrh. Calam.* 64.

B. spiculi-tenuata. *Knapp t.* 81.

B. verticillatus. *Cavan. Ic. t.* 590.

Festuca elatior, paniculis minùs sparsis, locustis oblongis strigosis aristatis purpureis splendentibus. *Raii Syn. ed.* 2. 261.

TWO distinct species have been confounded under *Bromus arvensis* in England. This, to which all the above synonyms, as well as the rest in Fl. Brit. after Ray's, and the description, certainly belong, was gathered by Sherard near Southampton, by Mr. W. Backhouse and by Mr. Knapp on the coast of Durham. The latter botanist rightly distinguished it, but was unfortunate in its name, not suspecting it to be the true original *arvensis*.

It is an annual plant, flowering late. The stem is often a yard high, with a very large, branching, many-flowered, drooping, and at length pendulous panicle, whose lowest stalks mostly have bracteas at their base; a great peculiarity. Leaves

Pub : 1804 Published by Jas Sowerby London

BROMUS arvensis.

Field Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle spreading: its stalks branched. Spikelets lanceolate, about eight-flowered. Florets elliptical, imbricated, depressed, smoothish.

SYN. Bromus arvensis. *Linn. Sp. Pl.* 113. *Sm. Fl. Brit.* 130. *Tr. of L. Soc. v.* 4. 289. *With.* 162. *Hull.* 25. *Leers. t.* 11. *f.* 3.

B. erectus *β. Hudf.* 50?

Festuca elatior, paniculis minùs sparsis, locustis oblongis strigosis aristatis purpureis splendentibus. *Rai Syn.* 414.

HOW much uncertainty has attended this grass as a native of Britain may be seen in Withering. We doubt whether Hudson or Lightfoot ever knew it. *Fl. Dan t.* 293. may be intended for an awnless variety; but we have never seen such, and the pubescence is incorrect. Sherard's herbarium contains the true plant, gathered by him near Southampton, and well known to Dillenius, as well as Linnæus. Our accurate friend Mr. Woodward first observed the same in the borders of a field at Earsham, Norfolk, many years ago, and supplied us with fresh specimens last June.

The root is annual. Stem simple, 2 or 3 feet high, leafy, striated, smooth. Leaves bright-green, a little downy on each side, their sheaths thickly clothed with soft hairs pointing downwards. Stipula short. Panicle erect, many-flowered; its branches whorled, many of them compound and subdivided, at least in luxuriant specimens, for the plant often grows much larger than in those now before us. Spikes lanceolate and erect at first, afterwards more ovate and drooping, formed of about 8 or more imbricated, elliptical, depressed (not cylindrical or distant) florets, variegated with green, purple, and white, but little downy, and remarkable for a glossy appearance [illegible] observable in other *Bromi*. The antheræ are occasion[illegible]le or yellow.


920

BROMUS erectus.

Upright Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, somewhat cylindrical, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle erect, a little branched. Florets numerous, slender. Radical leaves very narrow, fringed with white scattered hairs.

SYN. Bromus erectus. *Hudf.* 49. *With.* 160. *Sibth.* 47. *Relb. Suppl.* 2. 8.

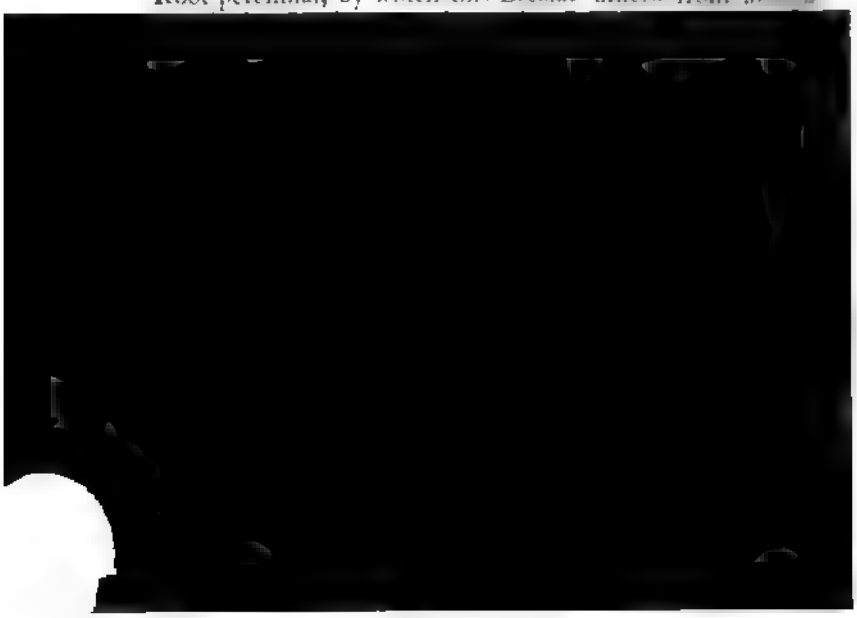
B. agrestis. *Allion. Ped. V.* 2. 249.

B. perennis. *Villars Dauph. V.* 2. 122.

Festuca avenacea sterilis, spicis erectis. *Raii Syn. ed.* 2. 261. *ed.* 3. 413. the synonyms erroneous.

THIS grass prefers a sand on a chalky soil. Mr. Crowe observed it at Holkham, Norfolk. The Rev. Mr. Hemsted sent this specimen from Cambridgeshire. It was first found by Sherard, near Oxford, from whom (through Bobart) it became known to Ray, as we find by the Sherardian Herbarium at Oxford, where, also, by the favour of the present liberal and scientific professor, Dr. Williams, I have learned to decypher the synonyms of this whole genus, which have not been understood by Dillenius, nor any subsequent author, even Linnæus having lent his hand to the almost inextricable confusion.

Root perennial, by which this *Bromus* differs from annuals




47

[ ]

BRON

Henry II.

BROMUS asper.

Hairy Wood Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle drooping, branched. Florets lanceolate, almost cylindrical, but slightly ribbed. Leaves uniform: the lower ones hairy.

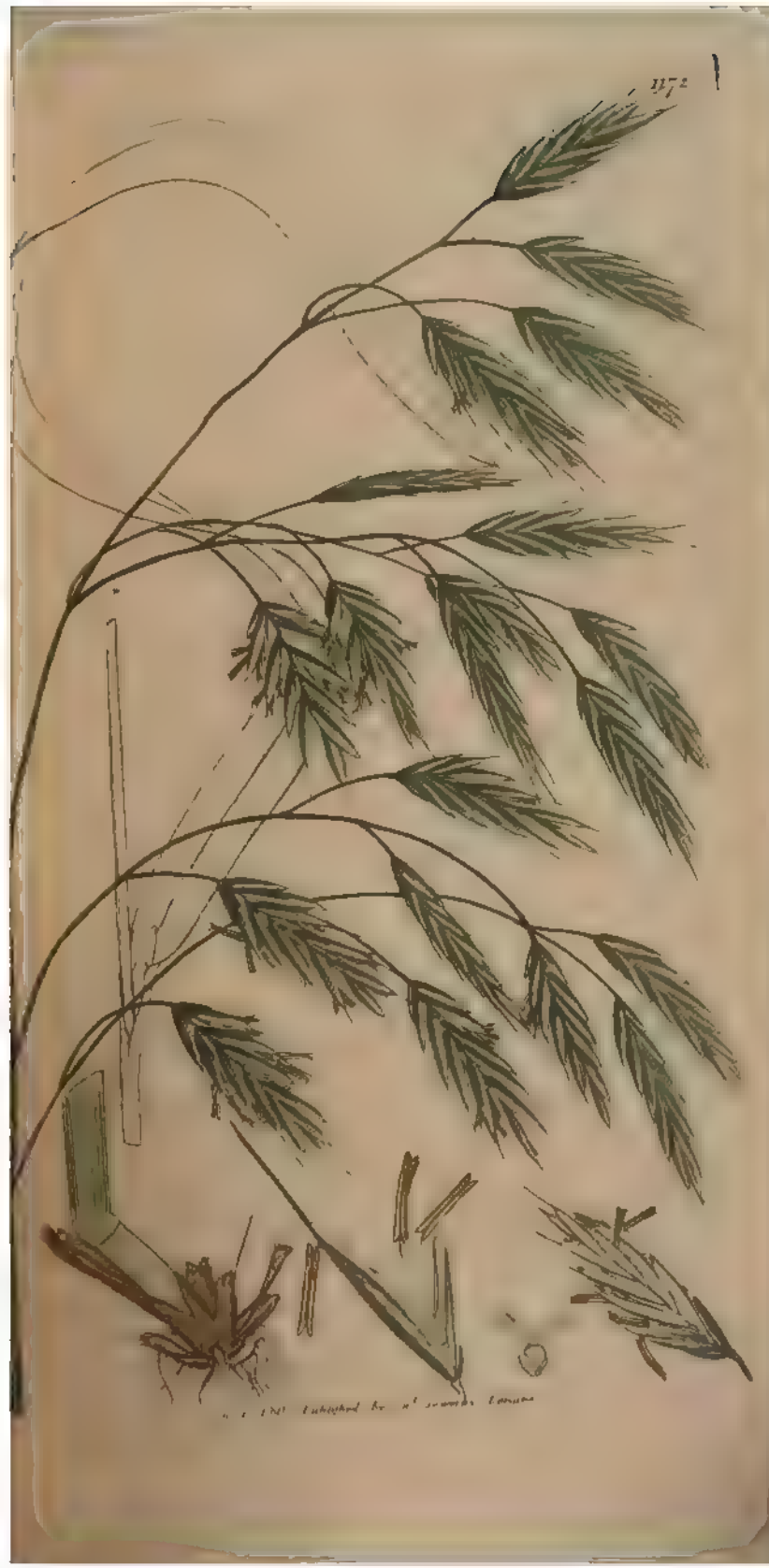
SYN. Bromus asper. *Linn. Suppl.* 111. *Sm. Fl. Brit.* 133. *Tr. of Linn. Soc. v.* 4. 293. *With.* 161. *Hull.* 25. *Relh.* 40. *Mart. Rust. t.* 126.

B. nemoralis. *Huds.* 51.

B. hirsutus. *Curt. Lond. fasc.* 2. *t.* 8. *Sibth.* 48. *Abbot.* 23.

Gramen avenaceum dumetorum, paniculâ sparsâ. *Raii Syn.* 415.

THIS gigantic grass often appears in moist woods and hedges about July and August, extending its wide-spreading drooping panicle over the tops of ferns and bushes, being


1172

BROMUS sterilis.

Barren Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC CHAR. Panicle drooping, mostly simple. Florets lanceolate, ribbed, furrowed. Leaves downy.

SYN. Bromus sterilis. *Linn. Sp. Pl.* 113. *Sm. Fl. Brit.* 134. *Tr. of L. Soc. v.* 4. 295. *Hudf.* 50. *With.* 162. *Hull.* 25. *Relh.* 46. *Sibth.* 47. *Abbot.* 23. *Curt. Lond. fasc.* 1. *t.* 9. *Mart. Rust. t.* 125.

Festuca avenacea sterilis elatior, seu Bromos Dioscoridis. *Raii Syn.* 412.

ONE of the most frequent grasses in waste ground, about hedges, and even in cultivated fields, flowering in June and July. The elegantly pendent panicle renders it conspicuous; but this ornamental quality will scarcely compensate for its inutility to the agriculturist, which by common consent has procured it the name of *sterilis*. In fact its leaves, though eatable for cattle, are too few and short-lived to render it of any use, and the harsh stems and panicle will scarcely be


A
1030

BROMUS diandrus.

Upright annual Brome-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Panicle upright, spreading, scarcely subdivided. Florets lanceolate, ribbed, furrowed, with only two stamina.

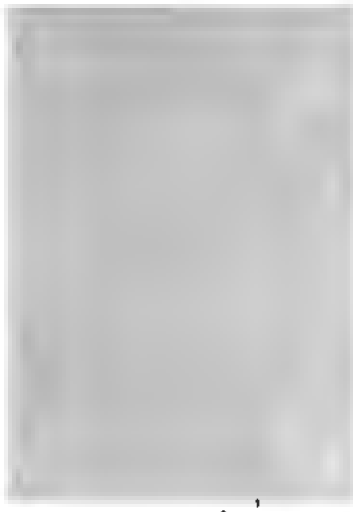
SYN. Bromus diandrus. *Curt. Lond. fasc.* 6. *t.* 5. *Sm. Fl. Brit.* 135. *Tr. of L. Soc. v.* 4. 296.

B. madritensis. *Linn. Sp. Pl.* 114. *With.* 161.

B. muralis. *Hudf.* 50. *Sibth.* 48.

Festuca avenacea sterilis, paniculis confertis erectioribus, aristis brevioribus. *Raii Syn. ed.* 2. 261.

OUR specimens of this *Bromus* were gathered at St. Vincent's rocks, Bristol, by the Rev. Mr. Hemsted. It grows mostly on sandy barren ground, walls, and waste places, but not commonly. Mr. Curtis, who is entitled to great praise



BROMUS ſylvaticus.

Slender Wood Brome-graſs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner huſk* fringed.

SPEC. CHAR. Spike ſimple, drooping, leaning one way. Spikelets ſeſſile, roundiſh. Awns longer than their huſk. Leaves hairy.

SYN. Bromus ſylvaticus. *Tr. of Linn. Soc. v.* 4. 300. *Sm. Fl. Brit.* 136. *Hull.* 26.

Feſtuca ſylvatica. *Hudſ. ed.* 1. 38. *With.* 158. *Relh.* 44. *Sibth.* 46. *Mart. Fl. Ruſt. t.* 114. *Dickſ. H. Sicc. faſc.* 13. 9.

Gramen avenaceum dumetorum ſpicatum. *Raii Syn.* 394.

FREQUENT in copſes and thickets by the ſides of ſhady lanes, more eſpecially on a gravelly or ſandy ſoil, flowering in July, when its ſlender form, riſing above the ſurrounding herbage, renders it conſpicuous. It becomes ſtill more ſo in the latter part of ſummer by aſſuming a yellowiſh or tawny hue, eſpecially in the lower leaves. It is of no agricultural uſe.

[illegible] Stem [illegible] foot or more


D

BROMUS pinnatus.

Spiked Heath Brome-grafs.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Spikelet* oblong, 2-ranked. *Awn* from below the top. *Inner husk* fringed.

SPEC. CHAR. Spike ſimple, erect, two-ranked. Spikelets ſeſſile, roundiſh. Awns ſhorter than their huſk. Leaves almoſt naked.

SYN. Bromus pinnatus. *Linn. Sp. Pl.* 115. *Tr. of Linn. Soc. v.* 4. 301. *Sm. Fl. Brit.* 137. *Hudſ. ed.* 1. 41. *Hull.* 26.

Feſtuca pinnata. *Hudſ.* 48. *Relb.* 44. *Sibth.* 46. *Abbot.* 22. *Dickſ. H. Sicc. faſc.* 13. 8.

Gramen ſpicâ Brizæ majus. *Raii Syn.* 392.

THIS graſs is found on open commons or heaths in a free-ſtone ſoil; not unfrequently in Yorkſhire, Oxfordſhire and Kent, but rarely elſewhere. It is perennial, and flowers in July. Many botaniſts have united it with the preceding; but its greater ſmoothneſs, firmneſs and rigidity, indeed its whole habit, ſeem to authorize a ſpecific diſtinction.

STIPA pennata.

Feather-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, single-flowered. Outer valve of the *Corolla* terminated by a very long *awn*, jointed at the base.

SPEC. CHAR. Awns feathery.

SYN. Stipa pennata. *Linn. Sp. Pl.* 115. *Sm. Fl. Brit.* 138. *Huds.* 29. *With.* 163. *Hull.* 17.

Gramen sparteum pennatum. *Dill. in Raii Syn.* 393.

THIS is one of the few plants admitted, with a mark of doubt, into the *Fl. Brit.* on the authority of books alone. The accurate Dr. Richardson and Mr. Lawson informed Dillenius they had found the Feather-grass on lime-stone rocks, overhanging a little valley called Long Sleadale, Westmoreland. They could not be mistaken as to its identity; and though it has often since been sought there in vain, it may, like *Ligusticum cornubiense*, reward the searches of some future botanist. There being no coloured figure of it extant, added to its great elegance, is a sufficient motive for its publication

Sept. 1. 1800 Published by Jos. Sowerby London

AVENA fatua.

Wild Oat, or Haver.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing several florets. Outer valve of the *corolla* bearing a twisted awn on its back.

SPEC. CHAR. Panicle erect. Flowers drooping. Calyx containing about three florets, which are hairy at the lower part, all awned, and ribless.

SYN. Avena fatua. *Linn. Sp. Pl.* 118. *Sm. Fl. Brit.* 139. *Huds.* 52. *With.* 164. *Hull. ed.* 2. 34. *Relh.* 42. *Sibth.* 49. *Abbot.* 24. *Winch. v.* 1. 12. *Mart. Rust. t.* 81. *Knapp. t.* 93. . *Leers.* 42. *t.* 9. *f.* 4. Ægilops quibusdam, aristis recurvis, seu Avena pilosa. *Raii Syn.* 389.

A PERNICIOUS weed in corn fields, especially among barley, flowering in July or August.

Root annual, with downy, somewhat whorled, fibres. Stem erect, simple, about a yard high, slightly leafy, very smooth. Leaves linear, spreading, ribbed, rough, occasionally hairy as well as their sheaths, which are thinner than the leaf itself, and generally smooth. Stipula obtuse, toothed and jagged. Panicle much branched, erect, the branches half whorled,

AVENA strigosa.

Bristle-pointed Oat.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing several florets. Outer valve of the *corolla* bearing a twisted awn on its back.

SPEC. CHAR. Panicle oblong, its branches pointing one way. Florets two in each calyx; their outer valves tipped with a double bristle.

SYN. Avena strigosa. *Schreb. Lips.* 52. *Retz. Obs. fasc.* 1. 11. *With.* 166. *Hull.* 26. *Willden. Sp. Pl. v.* 1. 446. *Host. Gram. v.* 2. 41. *t.* 56.

ALTHOUGH Dr. Withering had admitted this on the list of British plants, I left it out of the *Flora Britannica*, conceiving his specimen to have sprung from some accidental importation of foreign seed. Since that time, however, we have had such authentic information from Mr. Brodie, the Rev. H. Davies, Mr. Robson, Mr. E. Forster, and other friends, of its being a common weed in corn fields in Scotland. With

AVENA pubescens.

Downy Oat-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing several florets. Outer valve of the *corolla* bearing a twisted awn on its back.

SPEC. CHAR. Panicle erect, nearly simple. Calyx containing about three florets. Receptacles bearded. Leaves flat, downy.

SYN. Avena pubescens. *Linn. Sp. Pl.* 1665. *Sm. Fl. Brit.* 140. *Huds.* 52. *With.* 165. *Hull.* 26. *Relh.* 42. *Sibth.* 49. *Abbot.* 24. *Lightf.* 105. *Knapp, t.* 90.

A. sesquitertia. *Linn. Mant.* 1. 34; the syn. of Scheuchzer erroneous.

Gramen avenaceum 7, seu glabrum (potius hirsutum) paniculâ purpuro-argenteâ splendente. *Ray Syn.* 406. *t.* 21. *f.* 2.

A NATIVE of limestone or chalky hills and pastures, in which situations it is not uncommon, flowering in June. Mr. W. Borrer sent it from Sussex.

Root perennial, somewhat creeping. Stem a foot or two in height, erect, straight, unbranched, smooth, leafy. Leaves flat, obtuse, spreading, short, except when luxuriant; clothed on both sides, as are also the sheaths of the lower ones, with soft spreading hairs. Stipula acute, triangular. Panicle upright, scarcely subdivided, but bearing 3 or 4 flowerstalks (which are rough to the touch) at each subdivision. Spikelets purplish, generally containing 2 perfect florets and an abortive one, on a long bearded stalk. Summit of the glumes shining and transparent. Awns twice as long as the calyx, brown, rough and twisted.

It is of no use in husbandry.


1640

104.

AVENA pratensis.

Narrow-leaved Oat-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing several florets. Outer valve of the *corolla* bearing a twisted awn on its back.

SPEC. CHAR. Spike erect. Calyx containing about five florets. Receptacles hairy. Leaves involute, finely serrated, naked.

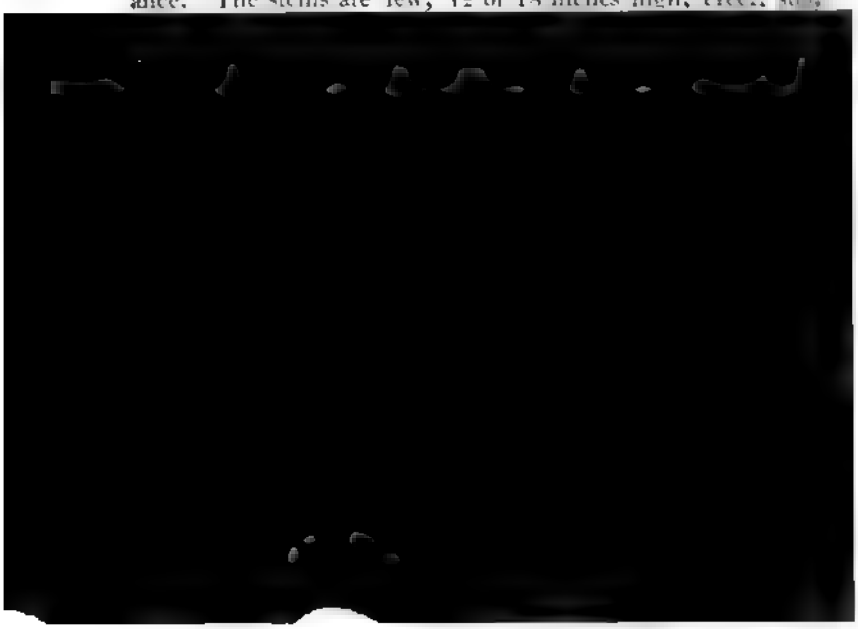
SYN. Avena pratensis. *Linn. Sp. Pl.* 119. *Sm. Fl. Brit.* 141. *Huds.* 52. *With.* 165. *Hull.* 26. *Relh.* 42. *Sibth.* 49. *Abbot.* 24. *Lightf.* 105.

A. bromoides. *Linn. Sp. Pl.* 1666.

Gramen avenaceum montanum, spicâ simplici, aristis recurvis. *Raii Syn.* 405. *t.* 21. *f.* 1.

A NATIVE of dry chalky or limestone pastures and heaths, where it flowers in July.

Root perennial, fibrous, downy, bearing many tufts of rigid, smooth, linear leaves, whose edges are rolled in, and finely serrated, and whose broad sheathing bases are of long continuance. The stems are few, 12 or 18 inches high, erect, stiff,



105.

AVENA planiculmis.

Flat-strawed Oat-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing several florets. Outer valve of the *corolla* bearing a twisted awn on its back.

SPEC. CHAR. Panicle erect. Calyx containing about five florets. Receptacles bearded upwards. Leaves naked, finely serrated, with rough sheaths. Stem compressed.

SYN. Avena planiculmis. *Schrad. Germ. v.* 1. 881. *t.* 6. *f.* 2.

DISCOVERED in 1807, by Mr. G. Don, on rocks upon the summits of the highest mountains of Clova, Angusshire. I had but just sent a description of this grass to the Linnean Society, by the name of *A. alpina*, when the 1st vol. of Prof. Schrader's *Flora Germanica*, printed so long ago as 1806, came to my hands. I greet with pleasure this excellent fellow-labourer in European botany, who is no compiler nor copyist, but an original observer, and whose *Flora* is justly announced by his countrymen as one of the very best that has ever appeared.

His long description answers in almost every minutest point to our plant, except that, according to Mr. Don, our roots are tufted, not creeping; nor can the branches of the panicle be called "*capillacei.*" This species most agrees, in general aspect, with *A. pubescens*, *t.* 1640, but is larger in every part. The leaves are never clothed with soft hairs, nor are their edges even, but finely serrated as in *pratensis*, *t.* 1204, from which they differ in their rough, greatly elongated sheaths. The flowers differ from both those species, not only in their much greater size, but in the hairiness of their partial stalk being crowded up into a very dense pencil-like tuft, under each floret, not dispersed over the whole stalk. The roots are perennial, with strong downy fibres. Stem from 2 to 3 feet high, according to Schrader's remark compressed, as well as the sheaths, which I had supposed owing to pressure in drying. Panicle spreading while in full flower only. Glumes shining, and partly pellucid. Awns strong, twice as long as the florets.

AVENA flavescens.

Yellow Oat-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, containing several florets. Outer valve of the *corolla* bearing a twisted awn on its back.

SPEC. CHAR. Panicle much branched, loose. Calyx unequal, containing about three florets. Receptacle hairy. Leaves flat, a little downy.

SYN. Avena flavescens. *Linn. Sp. Pl.* 118. *Sm. Fl. Brit.* 142. *Hudf.* 53. *With.* 165. *Hull.* 26. *Relh.* 51. *Sibth.* 49. *Abbot.* 25. *Curt. Lond. fasc.* 3. *t.* 5.

Gramen avenaceum pratense elatius, paniculâ flavescente, locustis parvis. *Raii Syn.* 407.

COMMON in chalky or limestone countries; sometimes on dry sandy soils, where the shining yellow of the panicle is seen in its greatest perfection. It is a perennial grass, flowering in July.

Root creeping, especially when luxuriant. Stems erect, curved at the bottom, slender, about a foot high, leafy, with about 3 joints. Leaves narrow, taper-pointed, more or less downy, especially their sheaths; and the joints of the stem are often furnished underneath with a circle of deflexed hairs.

1

S. ovatus.

Tail-grass.

ANDRIA Digynia.

al. of 2 valves, single-flowered, with *as.* Outer valve of the *corolla* with 2 *ms*, and a dorsal twisted one.

. . . . .

us **ovatus.** *Linn. Sp. Pl.* 119. *Sm. F.* 143. *With.* 166. *Hull.* 17. *Dicks. H. Sicc.* 7. 1.

ecturos spicâ rotundiore. *Moris. sect.* 8. *t.* 4. *f.* 1.

We have received this from Guernsey. It was first observed *ere* by Mr. Gosselin, who sent specimens to Mr. Dickson. *t* grows in sandy open places, flowering in June, and remains *ar* some time afterwards bleaching in the wind.

The annual root consists of a few thick downy fibres. Stem solitary, various in height and thickness, erect, leafy, jointed, round, very smooth. Leaves lanceolate, ovate at the base, flat, soft and downy, with very long, inflated, downy sheaths. Stipula oblong. Spike at first erect, but most commonly driven

July 1 1804 Published by W. Jones, London.

27.

LAGURUS ovatus.

Hare's-tail-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, single-flowered, with feathery awns. Outer valve of the *corolla* with 2 terminal awns, and a dorsal twisted one.

SPEC. CHAR. . . . .

SYN. Lagurus ovatus. *Linn. Sp. Pl.* 119. *Sm. Fl. Brit.* 143. *With.* 166. *Hull.* 17. *Dicks. H. Sicc. fasc.* 7. 1.

Alopecuros spicâ rotundiore. *Moris. sect.* 8. *t.* 4. *f.* 1.

WE have received this from Guernsey. It was first observed there by Mr. Gosselin, who sent specimens to Mr. Dickson. It grows in sandy open places, flowering in June, and remains for some time afterwards bleaching in the wind.

The annual root consists of a few thick downy fibres. Stem solitary, various in height and thickness, erect, leafy, jointed, round, very smooth. Leaves lanceolate, ovate at the base, flat, soft and downy, with very long inflated downy sheaths

July 1 1804 Published by J. Sowerby, London.

ARUNDO Phragmites.

Common Reed.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Florets* surrounded with long down.

SPEC. CHAR. Calyx containing five florets. Panicle loose.

SYN. Arundo Phragmites. *Linn. Sp. Pl.* 120. *Hudf. Fl. An.* 53. *With. Bot. Arr.* 116. *Relb. Cant.* 51. *Sibth. Ox.* 50.

A. vallatoria. *Rau Syn.* 401.

NOTHING can be more common than the reed here represented, in ditches, ponds, and the margins of rivers, where it flowers in the middle of summer, after which its waving silvery plumes, consisting of long down remaining in the brown hulks of the calyx, continue to ornament many a dreary fen throughout the autumn, lifting their heads high above all other herbage, till their dry stalks are cut for thatching or some such use. They are for no purpose more useful, than to make warm sheltered enclosures for a kitchen garden.

The roots are perennial, running far into the mud. Straws annual, about 6 feet high, erect, round, jointed, very smooth, leafy. Leaves alternate, long, lanceolate, tapering to a fine point, striated, smoother and paler beneath, their edges a little rough; their bases sheathing the straw and each other, and crowned with an extremely short jagged stipula, accompanied on each side by a small portion of silky down. Panicle nearly erect when in flower, purplish, but after impregnation its branches become more loose and drooping. The calyx-valves are unequal, containing about five flowers (sometimes fewer) placed in two ranks upon a small stalk. Corolla of two valves, one of them very long and pointed, to the base of which is attached externally a tuft of long soft slender hairs, which are lengthened after flowering, and, spreading in every direction, give the feathery appearance above mentioned. The stamina are very slender. Styles reflexed, with thick tufted stigmas.

ARUNDO Calamagrostis.

Small Reed.

TRIANDRIA Digynia.

Gen. Char. *Cal.* of 2 valves. *Florets* surrounded with long down.

Spec. Char. Calyx single-flowered, longer than the corolla. Panicle erect, diffuse. Flowers scattered, erect. Awn terminal, short. Down longer than the corolla.

Syn. Arundo Calamagrostis. *Linn. Sp. Pl.* 121. *Sm. Fl. Brit.* 146. *Hull. ed.* 2. 35. *Relh.* 44. *Knapp. t.* 96. *Fl. Dan. t.* 280. *Schrad. Germ. v.* 1. 214. *t.* 4. *f.* 4. *Ehrh. Calam.* 84.

A. epigejos. *Huds.* 54.

Calamagrostis epigejos. *With.* 123.

C. minor, glumis ruffis et viridibus. *Raii Syn.* 401.

Native of moist woods, and fenny places, flowering early in July. It is rather an uncommon plant, chiefly noticed hitherto in the counties of Norfolk, Cambridge, and Lincoln.

Root fibrous, or slightly creeping, perennial. Stems erect, 3 or 4 feet high, round, very smooth, much more slender than in *A. Phragmites* or *epigejos*, leafy, sometimes branched. Leaves linear, pointed, narrow, bright green, roughish beneath, sometimes a little hairy above. Sheaths long, close. Stipula lanceolate, obtuse, often torn, smooth, decurrent. Panicle erect, much branched, loosely spreading. Flowers scattered, erect, very numerous, on capillary rough stalks. Calyx-valves bright brown or purplish, nearly equal, lanceolate, pointed, keeled, roughish, slightly ribbed, much longer than the corolla, whose valves are white, unequal, torn at the top, the larger bearing a minute awn between its terminal segments. The down is longer than the corolla, but scarcely so long as the calyx.

This is certainly the Linnæan *A. Calamagrostis*, and what we described in our *v.* 6. *p.* 403, though a wrong figure was there annexed to the description, an error which we shall correct by a new page of letterpress to *t.* 403.

Jacob W. Lay lithographed by Bates

ARUNDO stricta.

Smallest Close Reed.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Florets* surrounded with long down.

SPEC. CHAR. Calyx single-flowered, full as long as the corolla. Panicle erect, close. Flowers scattered, erect, with a dorsal awn. Down shorter than the corolla. Stipula very short.

SYN. Arundo stricta. *Schrad. Germ. v.* 1. 215. *t.* 4. *f.* 5.

A. neglecta. *Ehrh. Calam.* 118.

DISCOVERED by Mr. G. Don, in June 1807, in a marsh called the White Mire, a mile from Forfar. We had but just communicated this discovery to the Linnæan Society, under Ehrhart's name *neglecta*, when we received Dr. Schrader's 1st vol. of his valuable *Flora*, and we now prefer the name he had, unknown to us, adopted from a publication of Timm which we have never seen.


1
2
3

ARUNDO arenaria.

Sea Reed, or Marram.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of two valves. *Florets* surrounded with long down.

SPEC. CHAR. Calyx single-flowered, longer than the corolla. Panicle spiked. Flowers erect, beardless. Leaves involute, pungent.

SYN. Arundo arenaria. *Linn. Sp. Pl.* 121. *Hudſ.* 54. *Mart. F. Ruſt. t.* 32. *Dickſ. H. Sicc. faſc.* 11. 5.

Calamagroſtis arenaria. *With.* 123.

Gramen ſparteum ſpicatum, foliis mucronatis longioribus, vel ſpicâ ſecalinâ. *Raii Syn.* 393.

FREQUENT on the ſea-ſhores in looſe blowing ſand, to which it ſeems intended by Nature to give ſtability, and thus to raiſe a bulwark againſt the encroachments of the waves. On this account its growth is much encouraged on the coaſts of Norfolk, where it is confounded with *Elymus arenarius*, and even *Carex arenaria*, under the name of *Marram*, and acts of parliament have been made for its preſervation. It flowers in July.

Root perennial, creeping to a great extent, jointed. Stem

LOLIUM perenne.

Perennial Darnel, or Rye-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of one husk, fixed, many-flowered.

SPEC. CHAR. Flowers beardless. The little spikes compressed, longer than the calyx.

SYN. Lolium perenne. *Linn. Sp. Pl.* 122. *Huds. Fl. An.* 55. *With. Bot. Arr.* 120. *Relh. Cant.* 52. *Sibth. Ox.* 50. *Leers Herb.* 47. *t.* 12. *f.* 1.

Gramen loliaceum angustiore folio et spica. *Raii Syn.* 395.

THIS very common species of grass is well known to the farmer by the name of Rye-grass, Ray-grass, or Crap. Its agricultural merits were first discovered in Norfolk, and from thence the seeds have been distributed throughout the kingdom, those who bought them little suspecting the plant was already a weed in their own fields. Its chief use is for an early crop


April 1796 Published by J. Sowerby, London

LOLIUM temulentum.

Bearded Darnel.

TRIANDRIA Digynia.

Gen. Char. *Cal.* of 1 valve, fixed, many-flowered. *Florets* in 2 ranks.

Spec. Char. Flowers bearded. Spikelets ſhorter than the calyx. Florets elliptical. Stem rough in the upper part.

Syn. Lolium temulentum. *Linn. Sp. Pl.* 122. *Sm. Fl. Brit.* 150. *With.* 168. *Hull.* 27. *Relh.* 45. *Abbot.* 26.

L. album. *Raii Syn.* 395.

An annual weed, found occaſionally in fields among wheat, barley or flax, coming to perfection in July.

The root is formed of a few ſhort downy fibres. Stem one or more, erect, two feet high, round, ſtriated, leafy; ſmooth and ſhining below; rough upwards. Leaves lanceolate, ſpreading, graſs-green, ribbed, rough above. Their ſheaths are alſo roughiſh. Stipula ſhort, blunt, crenate. Spike long and upright, with an angular rough ſtalk. Spikelets alternate; in 2 ranks, a little tumid. Calyx of one, linear, flattiſh, beardleſs huſk, rough to the touch, moſtly accompanied, in

Pub.d 1803 Published by J.C. Sowerby London.

LOLIUM arvense.

Annual Beardless Darnel.

TRIANDRIA Digynia.

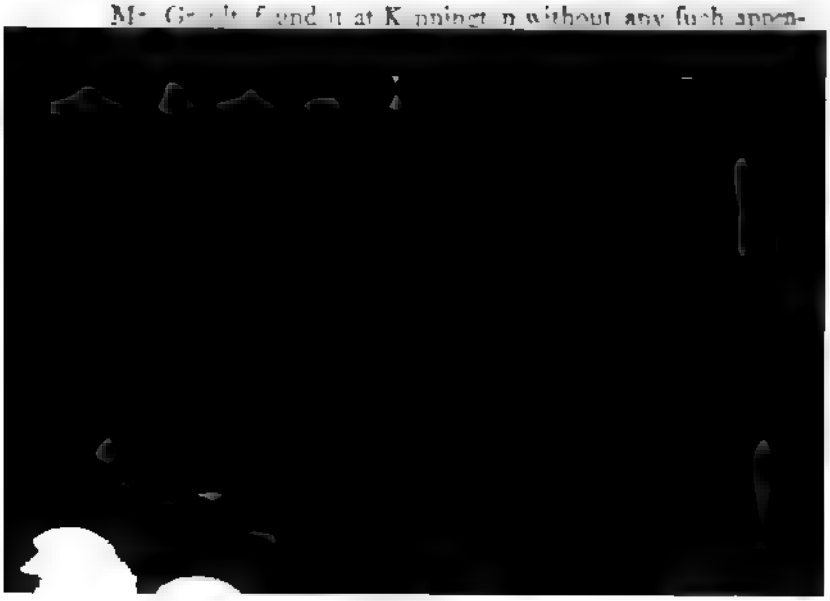
GEN. CHAR. *Cal.* of 1 valve, fixed, many-flowered. *Florets* in 2 ranks.

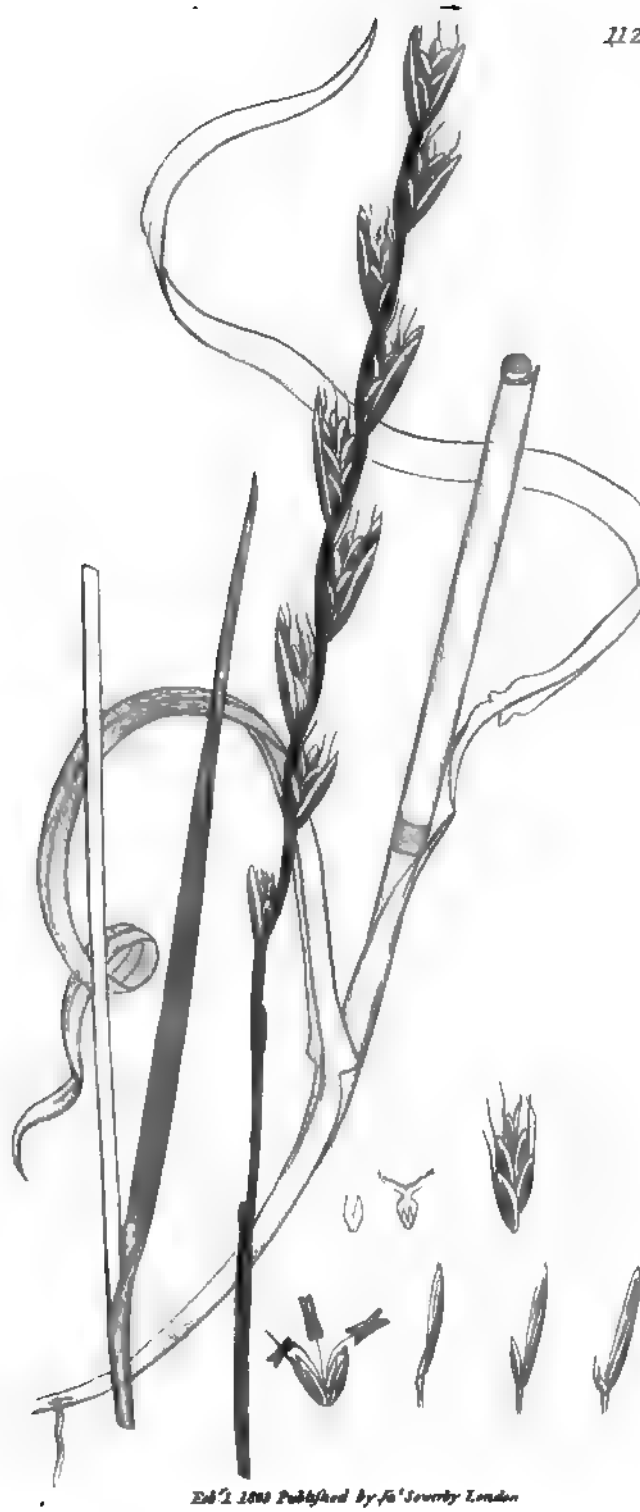
SPEC. CHAR. Flowers almost beardless. Spikelets as long as the calyx. Florets elliptical. Stem very smooth.

SYN. Lolium arvense. *With.* 168. *Sm. Fl. Brit.* 151. *Hull.* 27. *Relh.* 46.

L. temulentum. *Hudf.* 55.

THIS smaller species of Annual Darnel is not, we believe, more frequent than the last, with which Linnæus confounded it. The specific character given by Mr. Hudson convinces us this was his *L. temulentum*. We have received it from Walthamstow by favour of Mr. E. Forster, who has in some spikelets observed 2, or even 3, small inner valves to its calyx. Mr. G[illegible] found it at K[illegible]ington without any such appen-





Ed'L 1800 Published by Jas Sowerby London

ROTBOLLIA incurvata.

Sea Hard-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* fixed, mostly single-flowered, simple, or divided into 2 parts. *Flowers* ranged alternately on a jointed common stalk.

SPEC. CHAR. Spike round, awl-shaped. Calyx-glume awl-shaped, divided, close pressed to the stalk.

SYN. Rotbollia incurvata. *Linn. Suppl.* 114. *Sm. Fl. Brit.* 151. *With.* 169. *Hull.* 29. *Relh. Suppl.* 2. 8.
Aegilops incurvata. *Linn. Sp. Pl.* 1490. *Hudf.* 441.
Gramen parvum marinum, spicâ loliaceâ. *Raii Syn.* 395.

FOUND on the sea coast and in salt marshes in several parts of the kingdom, flowering in August and September.

Root fibrous, annual. Stems numerous, procumbent in their lower part, branched, jointed and bent, very smooth, leafy. Leaves linear, pointed, recurved, rough on the edges and upper side; their sheaths a little inflated, striated, smooth, crowned [illegible]

117.

ELYMUS arenarius.

Upright Sea Lyme-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* lateral, aggregate, of 2 valves, containing (mostly) several flowers.

SPEC. CHAR. Spike upright, close. Calyx lanceolate, the length of the spikelets. Leaves with a spinous point.

SYN. Elymus arenarius. *Linn. Sp. Pl.* 122. *Sm. Fl. Brit.* 152. *Huds.* 56. *With.* 170. *Hull.* 27. *Mart. Rust. t.* 31. *Knapp, t.* 108.

Spartum herba 4 Batavicum. *Clus. Hist.* 2. 221.

ONE of the most valuable creeping-rooted grasses for binding the loose sand on the sea shore, in which its roots run to a very great extent. See p. 520 and 928 for remarks on this subject.

Elymus arenarius is found on the sandy coasts of Britain in various places, but does not often produce spikes. On the north side of Norfolk, at Wells, Mundesley, &c. it is abundant. Roots brought from thence by Mr. Crowe many years ago, and planted on a gravelly bank at Lakenham, have greatly increased, and blossom more or less plentifully every year in July. From these our specimen was procured. The stem is 3 or 4 feet high, erect, strong, round, very smooth, striated, most leafy at the base. Leaves hard and rigid, long, involute, spinous-pointed, very glaucous; marked on the upper side with strong rough furrows; smooth beneath. Stipula very short, by which the plant may at any time be distinguished from *Arundo arenaria*. Spike erect, dense, glaucous, not half so long as that of *E. geniculatus, t.* 1586, from which it is also known by the greater proportionable breadth of its calyx-valves, which do not exceed the spikelets in length, and moreover, as Mr. Sowerby observes, by not having the common stalk of its spike bordered or winged as in that species.


1672

ELYMUS geniculatus.

Pendulous Sea Lyme-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* lateral, aggregate, of 2 valves, containing (mostly) several flowers.

SPEC. CHAR. Spike bent perpendicularly downward, loose. Calyx bristle-shaped, spreading, longer than the spikelets. Leaves with a spinous point.

SYN. Elymus geniculatus. *Curt. Brit. Grasses*, 46. *Sm. Fl. Brit.* 153. *Knapp, t.* 109.

Elymus. *Linn. Am. Acad. v.* 7. 192. *t.* 2. *f.* 5. *With. v.* 1. 134. *t.* 2. *f.* 26.

DISCOVERED in marshes near Gravesend by Mr. Dickson. Mr. Curtis first made it known to the botanical world as distinct from *E. arenarius*, for even Linnæus seems to have confounded them. Our specimen grew in the Liverpool garden. July is the season of its flowering.

Root perennial, downy. Herb glaucous. Leaves hard and rigid, long, narrow, involute, furrowed above, smooth beneath, ending in a sharp spine. Stipula very short. Stem round, very smooth, 3 or 4 feet high, ending in a simple lax spike, a foot and half or 2 feet in length, remarkable for being, in the course of its flowering, bent down at an acute angle, about the second or third spikelet, and so becoming perfectly pendulous, nor can it be unbent without breaking. Calyx-glumes very narrow and tapering, smooth, commonly about half as long again as the spikelets they enfold, each of which consists of 3 or 4 alternate downy florets, standing on a stalk which is sometimes elongated and naked.

ELYMUS europæus.

Wood Lyme-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* lateral, aggregate, of 2 valves, containing (mostly) several flowers.

SPEC. CHAR. Spike erect. Spikelets two-flowered, bearded. Calyx without furrows.

SYN. Elymus europæus. *Linn. Mant.* 35. *Sm. Fl. Brit.* 154. *With.* 170. *Hull.* 27. *Sibth.* 51.
Hordeum sylvaticum. *Huds.* 57. *Abbot.* 27. *Mart. Rust. t.* 45.
Gramen secalinum majus sylvaticum. *Raii Syn.* 392.

A NATIVE of woods and thickets on a chalky soil. We have received it from Yorkshire and other parts of England, flowering in June.

Root perennial, fibrous, rather tufted, downy. Stems about 2 feet high, erect, straight, simple, leafy; naked, smooth and striated above. Leaves lanceolate, sharp-pointed, flat, ribbed, broadish, rough; their sheaths ribbed, more or less rough with deflexed hairs. Stipula very short, crenate. Spike erect, or


1317

HORDEUM murinum.

Wall, or Mouse Barley.

TRIANDRIA Digynia.

GEN. CHAR. *Calyx* lateral, of 2 valves, containing a single floret, and growing 3 together.

SPEC. CHAR. Lateral flowers male, awned. Calyx-valves of the intermediate flower lanceolate, fringed.

SYN. Hordeum murinum. *Linn. Sp. Pl.* 126. *Sm. Fl. Brit.* 155. *Huds.* 56. *With.* 171. *Hull.* 28. *ed.* 2. 37. *Relh.* 46. *Sibth.* 51. *Abbot.* 26. *Curt. Lond. fasc.* 5. *t.* 9. *Mart. Rust. t.* 43. *Knapp. t.* 104. *Dicks. H. Sicc. fasc.* 13. 10. *Sm. Rel. Rudb.* 12. *f.* 2.

Gramen secalinum et Secale sylvestre. *Raii Syn.* 391.

ONE of the most common of grasses by way-sides under walls, and in waste ground among rubbish, flowering all summer long.

Root annual, fibrous, whitish. Stems numerous, a foot or thereabouts in length, spreading in all directions at their base, but bent at their joints and ascending, smooth, leafy, round. Leaves loosely spreading, acute, rough, of a brightish green, with short stipulas, and smooth, slightly inflated,

HORDEUM pratense.

Meadow Barley.

TRIANDRIA Digynia.

GEN. CHAR. *Calyx* lateral, of 2 valves, containing a single flower, and growing 3 together.

SPEC. CHAR. Lateral flowers abortive, aristated. Calyx-valves bristle-shaped, rough.

SYN. Hordeum pratense. *Huds. Fl. An.* 56. *With. Bot. Arr.* 126. *Relh. Cant.* 54. *Sibth. Ox.* 51. *Mart. Fl. Rust. t.* 108.

H. nodosum. *Linn. Sp. Pl.* 126.

H. murinum β. *ibid.*

Gramen secalinum. *Ger. em.* 29.* *Raii Syn.* 392.

A VERY common grass in meadows and pastures that are a little moist, as in the north part of Hyde Park, flowering in June.

Root perennial, fibrous, but often becoming knotty in a situation whose degree of moisture is fluctuating, as happens also to *Phleum pratense*. Straw 18 inches or 2 feet high, erect, slender, smooth, bearing 3 or 4 leaves, but none near the top. Leaves narrow, pointed, roughish, often hairy on the upper side, having a long sheathing striated base, brown and contracted at its summit, and sometimes crowned with a minute stipula. Spike ter-

HORDEUM maritimum.

Sea Barley. Squirrel-tail Grass.

TRIANDRIA Digynia.

GEN. CHAR. *Calyx* lateral, of 2 valves, containing a single flower, and growing 3 together.

SPEC. CHAR. Lateral florets male, with shorter awns; their inner husk half-ovate.

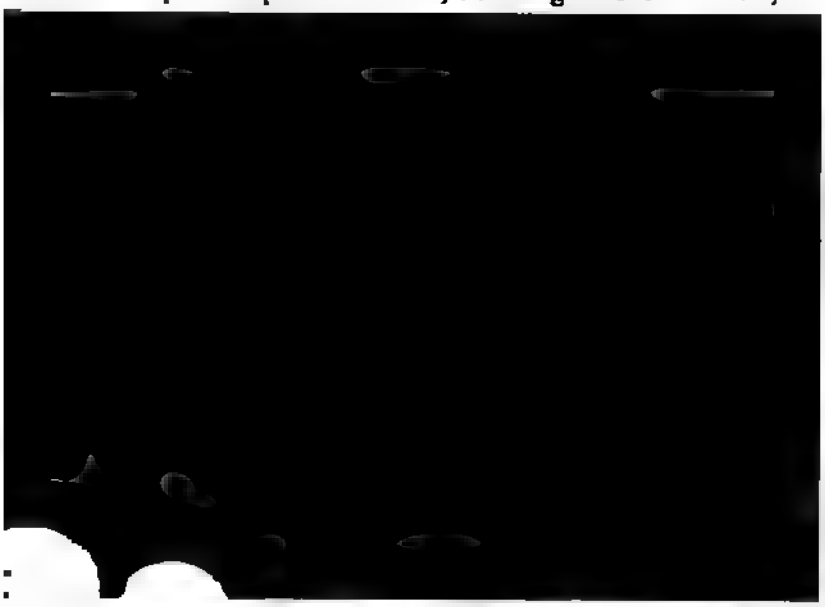
SYN. Hordeum maritimum. *Sm. Fl. Brit.* 156. *With.* 172. *Hull.* 28. *Relh.* 47. *Mart. Rust. t.* 44.

H. marinum. *Huds.* 57. *Dicks. H. Sicc. fasc.* 5. 4.

Gramen secalinum palustre et maritimum. *Raii Syn.* 392.

HUDSON has very clearly distinguished this grass, which is confined to pastures near the sea, from the *H. murinum*, so common every where by road-sides and path-ways. We cannot therefore but wonder at their being confounded in the *Flora Londinensis*, where every thing related of the Squirrel-tail Grass under *H. murinum*, belongs to the *maritimum*.

The present species is annual, flowering in June and July.



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TRITICUM junceum.

Sea Rushy Wheat-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, solitary, many-flowered, upon a zigzag toothed *rachis*.

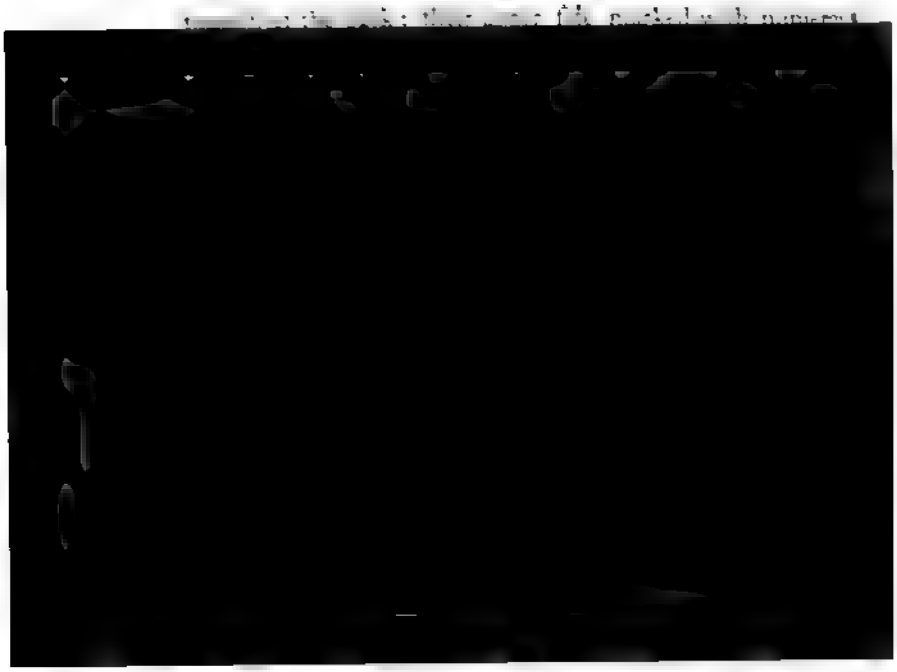
SPEC. CHAR. Calyx blunt, five-flowered. Leaves rolled inward, sharp-pointed.

SYN. Triticum junceum. *Linn. Sp. Pl.* 128. *Sm. Fl. Brit.* 127. *Hudf.* 58. *With.* 173. *Hull.* 28. *Dickl. H. Sicc. fasc.* 6. 9.

Gramen maritimum, spicâ loliaceâ, foliis pungentibus, nostras. *Dill. in Raii Syn.* 391.

NOT uncommon in the loose sand of the sea-coast, which its long tough creeping roots, throwing out numerous woolly fibres, help to confine and keep stationary; to which purpose this grass co-operates with *Carex arenaria*, *Elymus arenarius*, and *Festuca rubra*. It flowers in July.

The whole plant is very glaucous; the lower part of the stem is however of a more or less vivid violet hue, and very smooth or shining. Leaves rigid and sharply pungent, perfectly




IX

TRITICUM repens.

Creeping Wheat-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, solitary, many-flowered, upon a zigzag toothed *rachis.*

SPEC. CHAR. Calyx awl-shaped, many-nerved, five-flowered. Florets sharp-pointed. Leaves flat. Root creeping.

SYN. Triticum repens. *Linn. Sp. Pl.* 128. *Sm. Fl. Brit.* 158. *Hudf.* 57. *With.* 173. *Hull.* 28. *Relh.* 55. *Sibth.* 52. *Abbot.* 27. *Mart. Fl. Rust. t.* 124.

Gramen spicâ triticeâ repens vulgare, caninum dictum. *Raii Syn.* 390.

THIS very troublesome and pernicious weed is but too well known to gardeners by the name of Couch, Quick, or Dog-grass. It thrives in all kinds of cultivated ground, flowering from June to September, and insinuating its long creeping perennial roots so deeply into the earth as to be with great difficulty extirpated; for a very small piece of the root left behind, soon sprouts forth into a fresh crop. The fibres moreover are

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TRITICUM caninum.

Bearded Wheat-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, solitary, many-flowered, upon a zigzag toothed *rachis.*

SPEC. CHAR. Calyx pointed, four-flowered, with about five nerves. Florets awned. Leaves flat. Root fibrous.

SYN. Triticum caninum. *Huds.* 58. *Sm. Fl. Brit.* 159. *With.* 173. *Hull.* 28. *Relh.* 48. *Sibth.* 52. *Abbot.* 27. *Knapp. t.* 112.

Elymus caninus. *Linn. Sp. Pl.* 124.

Gramen caninum aristatum, radice non repente, sylvaticum. *Raii Syn.* 390.

FOUND in woods and about hedges on a chalky or limestone soil, more generally than the *Elymus europæus, t.* 1317. It flowers in July, and is perennial.

The root is composed of downy fibres, not at all creeping.

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TRITICUM cristatum.

Crested Wheat-grass.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves, solitary, many-flowered, upon a zigzag toothed *rachis*.

SPEC. CHAR. Calyx elliptical, awned, keeled, obscurely ribbed. Florets awned. Spikelets closely imbricated, two-ranked, depressed, straight. Stems simple.

SYN. Triticum cristatum. *Schreb. Gram. fasc.* 2. 12. *t.* 23. *f.* 2.

Bromus cristatus. *Linn. Sp. Pl.* 115. *Willd. Sp. Pl. v.* 1. 439.

Festuca culmo spicato, spiculis multifloris. *Gmel. Sib. v.* 1. 115. *t.* 23.

Gramen triticeum, spicâ latiore compactâ. *Burb. Cent.* 1. 32. *t.* 50. *f.* 3.

WE cannot resist the temptation of adding a third new British grass to our present monthly publication, and especially so rare and little known a species as this, which Mr. G. Don discovered on steep banks and rocks, by the sea side, between Arbroath and Montrose, flowering very sparingly. Gmelin says it is common throughout Siberia. His own specimens

TRITICUM loliaceum.

Spiked Sea Wheat-grass.

TRIANDRIA Digynia.

Gen. Char. *Cal.* of two valves, solitary, alternate, upon a zigzag *rachis*, and containing several obtuse, but pointed, florets.

Spec. Char. Calyx many-flowered. Spike simple, compressed; spiculæ ovate, all leaning one way.

Syn. Triticum unilaterale. *Ait. Hort. Kew. v. 1. 122.* but not of Linnæus.

T. maritimum. *With. Bot. Arr.* 130.

Poa loliacea. *Hudf. Fl. An.* 43. *With. Bot. Arr.* 91. *Relh. Cant.* 37.

Gramen pumilum Loliaceo simile. *Raii Syn.* 395.

Gr. loliaceum exile durius. *Smith Rel. Rudb.* 13.

GATHERED by the Rev. Mr. Bryant, on the northern coast of Norfolk. It occurs on the sandy beach in many parts of England, according to Ray and Hudson, flowering about Midsummer.

The root is annual, consisting of long downy fibres as in most grasses that grow in pure sand. Several short rigid curved stems arise from it, clothed with sheathing leaves, which are involute when dry. A short notched beardless stipula crowns the inside of their sheaths. The general spike is terminal,

28.

MONTIA fontana.

Water Chickweed, or Blinks.

TRIANDRIA Trigynia.

GEN. CHAR. *Cal.* of 2 leaves. *Cor.* of 1 irregular petal. *Caps.* with 1 cell, 3 valves, and 3 seeds.

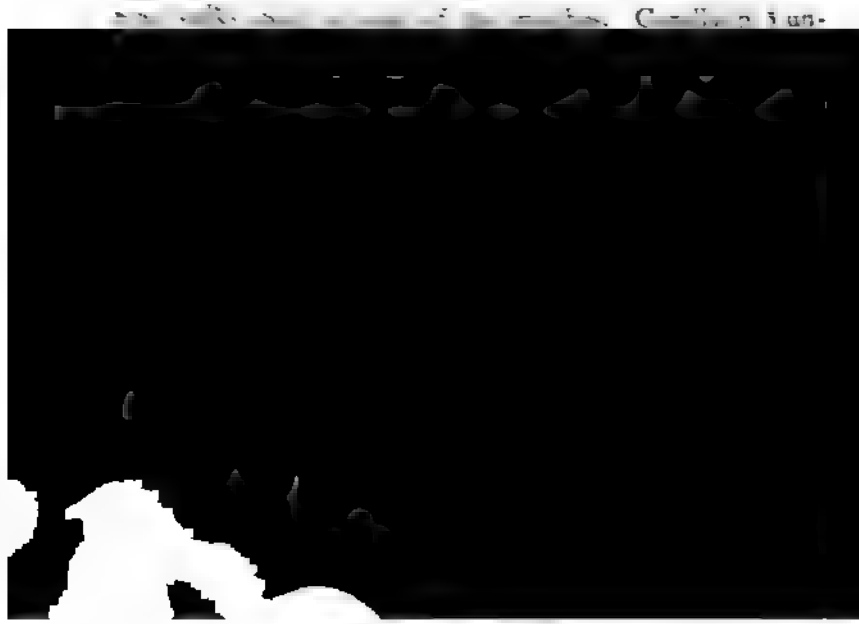
SPEC. CHAR. . . . . .

SYN. Montia fontana. *Linn. Sp. Pl.* 129. *Sm. Fl. Brit.* 161. *Hudson.* 60. *With.* 175. *Hull.* 29. *Relh.* 49. *Sibth.* 53. *Abbot.* 28. *Curt. Lond. fasc.* 3. *t.* 8.

Alsine parva palustris tricoccos portulacæ aquaticæ similis. *Ray Syn.* 352.

COMMON in small rills and plashy spots, especially on a gravelly soil, flowering in April and May.

The root is annual, small and fibrous. Stem much branched from the very base, prostrate in the lower part, and (as we have observed respecting some other annual plants) frequently taking root at the joints. Leaves opposite, spatulate, entire. Flowers small, white, expanding at eleven o'clock for about an hour, but only in the brightest sunshine, and standing on clus-



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HOLOSTEUM umbellatum.

Umbelliferous Chickweed.

TRIANDRIA Trigynia.

GEN. CHAR. *Cal.* five-leaved. *Cor.* of five petals. *Capsule* one-celled, nearly cylindrical, bursting at the top.

SPEC. CHAR. Flowers in umbels.

SYN. Holosteum umbellatum. *Linn. Sp. Pl.* 130. *Wilr. Sp. Arv.* 132. *Roe's Elements (Appendix)*, 445. *t.* 2. *f.* 4.

Cerastium umbellatum. *Hall. Fl. An.* 201.

THIS plant was first discovered in England by Mr. John Pitchford, a most accurate and indefatigable botanist, who found it in the spring of 1765, on the walls of Norwich. We are informed it was a long time before this gentleman's discovery met with any credit, some of the first English botanists mistaking this plant for Cerastium semidecandrum. Mr. Roe however described and figured it, with its proper synonyms, in his Elements of Botany, published in 1775; a work which has eminently contributed to explain and recommend the system and principles of Linnæus in this country. Soon afterwards Mr. Hudson admitted it into the second edition of his

J. Sowerby del. Aug.t 1. 1791

POLYCARPON tetraphyllum.

Four-leaved All-seed.

TRIANDRIA Trigynia.

Gen. Char. *Cal.* 5-leaved. *Petals* 5, ovate, minute. *Caps.* of 1 cell and 3 valves. *Seeds* numerous.

Spec. Char. . . . . . .

Syn. Polycarpon tetraphyllum. *Linn. Sp. Pl.* 131. *Sm. Fl. Brit.* 162. *Hudf.* 60. *With.* 176. *Hull.* 30. *Dickf. H. Sicc. fasc.* 17. 6.

GATHERED by A. B. Lambert, esq. on the beach at Weymouth towards Portland island, flowering in the latter part of summer. It grows on several parts of the south-west coast of England, and seems to have been first noticed there by Mr. Hudson. In the south of Europe it is frequent in dry waste ground, not being confined to a maritime situation, nor to any particular season of flowering.

Root small, annual. Stem much branched, and spreading flat on the ground, leafy, terminating in numerous forked